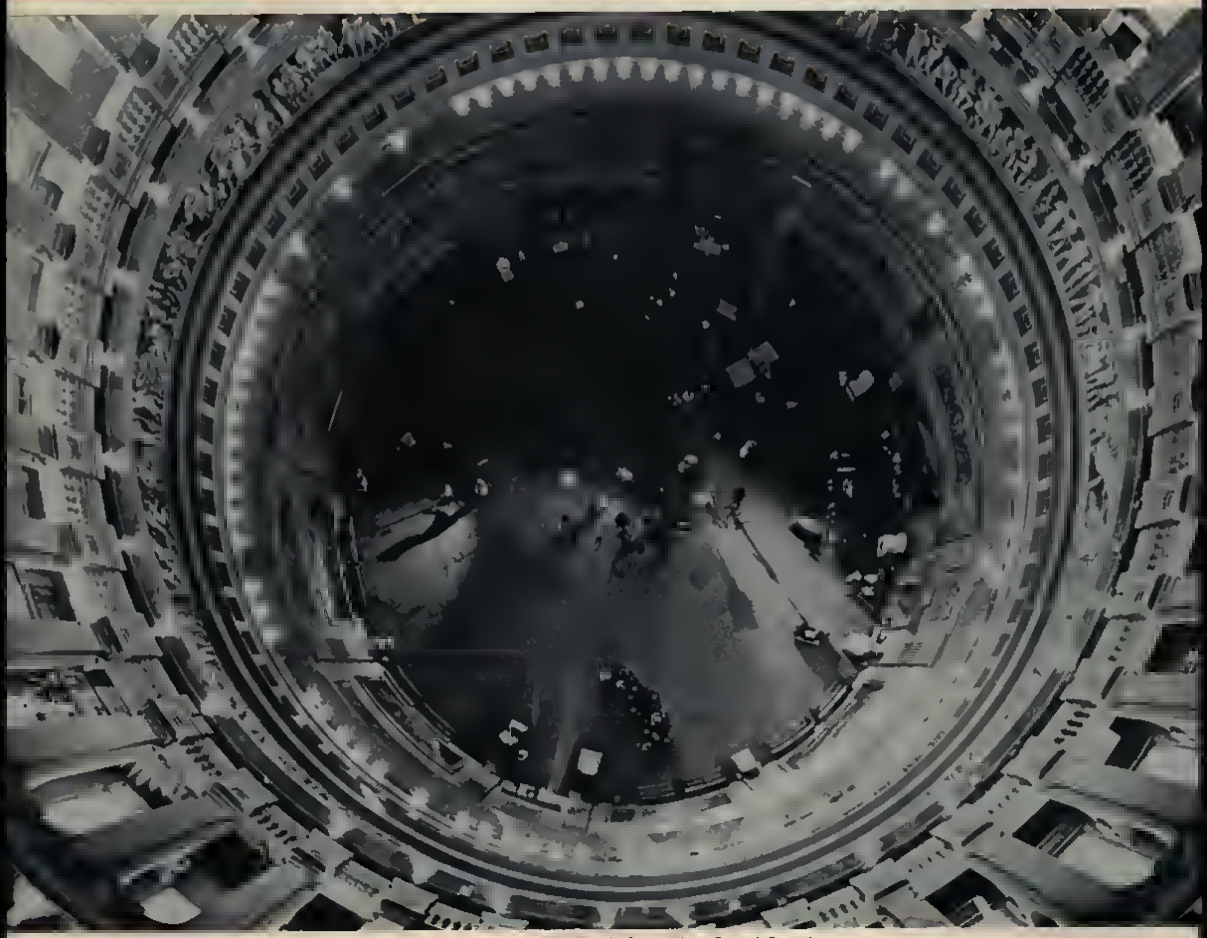
AUGUST, 1962 • 35¢

AMERICAN Cinematographer

Magazine Of Motion Picture Photography And Production Techniques



Filming a scene for "Advise & Consent" in Capitol Rotunda.

IN THIS ISSUE

3 IMPORTANT ARTICLES ON FILM PRODUCTION FOR TV

"FOR PRIZE-WINNING QUALITY WE DEPEND ON DU PONT FILMS"

says Dick Dubelman, Lux-Brill Productions, Inc., creator and producer of Remco TV commercials. Dick is shown directing (top, left) with Don Malkames, ASC, who shot the "Johnny Reb" spot that won them a Special Award Trophy for Quality and Excellence at the International Film Festival. This prize-winning team puts top quality into every phase of its work: script, direction, shooting, editing, music, effects. "The fact that we use Du Pont film," Dick says, "means we find it the very highest quality —particularly in separating tones." Du Pont films—and technical data on them—are available from any of the Du Pont Photo Products sales offices shown here.

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Listings Continued on Pages 454, 458, 460, 462 and 464

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AMERICAN
Cinematographer

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August, 1962 Vol. 43, No. 8

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ON THE COVER

A RARE VIEW of the Capitol rotunda, Washington, D.C. Bustling below is cinematographer Sam Leavitt and camera crew filming a scene for Otto Preminger's "Advise & Consent." Complete story about photography of the picture appears in this issue.

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INDUSTRY NEWS

News briefs of industry activities, products and progress

New Location For Pioneer Camera Exchange

An old familiar Hollywood landmark disappeared last month when the Hollywood Camera Exchange vacated its 32-year-old location at 1600 North Cahuenga, a block off Hollywood Boulevard However, the venerable camera and equipment center did not disappear from Hollywood Its owner, Cliff Thomas, who established the business in 1929, moved the business to his own property on 1607 Cosmo Street, just around the corner on Selma and a half block north on Cosmo

Thomas was one of the original charter members of the Hollywood cameramen's union — Local 659, I A T S E. He established the Hollywood Camera Exchange mainly to service the needs of the industry's cameramen who, in those days usually owned their own cameras and associated equipment—an essential to acquiring a job.

In Hollywood's pioneer era of silent movie making, there were no equipment rental facilities Cameramen mostly rented their cameras to one another, depending on the requirements of the assignment Thomas recalls having a hectic time rounding up ten Bell & Howell standard 35mm cameras for a big production filmed in the mid-twenties

To fill the burgeoning industry's growing need for equipment, Thomas opened shop at 1600 North Cahuenga, just across the street from the Union's Hollywood headquarters Here Cliff Thomas acted as agent for cameramen who owned their own cameras, and arranged camera rentals between them and studios and independent producers

Later, responding to the cameramens' need for a rugged but lightweight tripod with pan and-tilt head, Thomas designed and manufactured the forerunner of the famous "Pro Junior," now made and marketed by Camera Equipment Company The manufacturing business expanded rapidly and one of its most popular items was the famous "H.C.E" combination filter holder and lens shade, which the company made for almost every make and size of still and motion picture camera lens.

The new location of Hollywood Camera Exchange is more spacious, affording orderly and attractive display of equipment, both new and used, plus rental facilities that include cutting rooms, film vaults, projection for film reviewing, in addition to the wide range of production equipment that may be rented by the day, week, or month

•

Hollywood Production Up

Despite television's steady swing away from 30-minute TV film shows and toward the 60 and 90-minute film, which many feared would substantially curtail the number of programs, July 1st saw 72 TV film series before the cameras compared with 63 a year ago.

In the production of feature films, the level remains the same as a year ago, with 34 productions shooting in Hollywood studios and 21 shooting by U.S producers outside the country

•

Camara Behind The Scenes

Behind the-scenes footage shot on location at Catalina Island by M G M newsreel crew while company was filming "The Hook" there, is being prepared for overseas exploitation of the picture via television. Edited footage will give viewers an idea of the logistics involved in shooting the production on location, and will also be made up as a theatre trailer for domestic exploitation of the picture

•

Dramatic Documentarias Big

The dramatic documentary film, which exhibitors have often ignored, is finding an important place in television, and a much larger audience. David L. Wolper, who is considered the world's leading independent producer of documentaries for TV, will concentrate on the production of dramatic documentaries, employing an original new technique

By injecting dramatization into the documentary technique, incorporating a story line in depicting careers of noted persons, places and events, Wolper expects to give his documentaries more entertainment value.

Most of his big TV documentaries like "Hollywood—The Golden Years,"

Continued on Page 456

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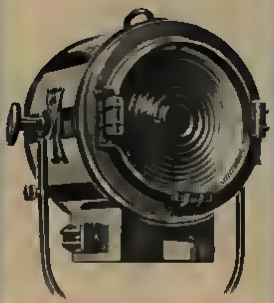

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INDUSTRY NEWS

Continued from Page 454

dealing with the silent film era, have been built up from stock footage gleaned from various Hollywood archives. Many of his future films will have stock footage as a nucleus, edited together with specially-filmed new shots.

To house his fast expanding operations, Wolper has annexed five offices adjacent to the company's main building at 8720 Sunset Blvd., and another nearby building is presently being converted to his use.

EARLY-DAY MOY motion picture camera donated to the American Society of Cinematographers Movie Museum is shown to members of the Society attending its June monthly meeting by Arthur Miller, the Museum's Curator

3-D Not Dead

The man who sparked the revival of 3-D movies in 1952 with "Bwana Devil," is back in the swim. Arch Oboler, who gave Hollywood film production a new lease on life by reviving and improving the filming and screening of motion pictures in three-dimension last month announced development of a new dimensional process utilizing two cameras and a single projector. Columbia and Paramount are said to be dickering for rights to the first production using his process.

Oboler's new, improved 3-D system is said to be relatively fool-proof against bad projection or lack of sync between the dual picture images which killed 3-D's chances in 1952. Oboler's single release-print is projected with aid of a new lens that is super-imposed before the projector's regular lens. Theatre-goers will use an improved type of viewing spectacle in plastic frame. Package deal for exhibitors includes loan of viewing glasses and the necessary auxiliary projection lens.

New Set Lighting Unit

Mole-Richardson Company, Hollywood, will soon announce a new high intensity arc lighting unit, which the company recently demonstrated to studio electrical department heads and cinematographers.

NOW A PROFESSIONAL PHOTO LIGHT THAT FITS THE PALM OF YOUR HAND... SO SIMPLE ANYONE CAN USE IT

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ADJUSTABLE HEAD tilts for bounce lighting, is calibrated 30° below and 90° above horizontal. Control arm makes it easy to tilt and lock head at any angle.

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PORTRAIT LENS Made of specially tempered glass for close-up work. Softens light and reduces contrast.

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UNIVERSAL BRACKET fits all cameras. Special bi-position mounting hole allows unit to be located at the side or 30° to the rear of camera.

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MOVIOLA model UDS 35mm picture on 3" bullseye, separate 35mm optical sound, with take-up arms, excellent $695.00

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1/16-1/35 combo 49.50
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BELL & HOWELL Filmotion 16mm viewer, list $95.00, used, excellent $69.50

NEUMADE Universal tightwind adapter fits any rewind, 16/35mm, list $45 00, new, reduced to $24.95

SPLICERS

BELL & HOWELL 16/35mm hot splicer, list $339, used. $125 00

SCHOEN Hollywood automatic 35mm mylar tape splicer, list $195 like new $99 50

ACE CLEARVISION Deluxe 16/35 mm mylar tape splicer, straight and diagonal List $125. Special offer of brand new splicer with Ace serrated cutter bar, only $69.50

GRISWOLD Senior model 16mm or 35mm cement splicers, list $36 00 Used $15.00

ACE Standard 16/35mm mylar tape splicer, straight and diagonal, original list $69 50. Like new $49.50

Listings Continued on Pages 452, 454, 460, 462 and 464

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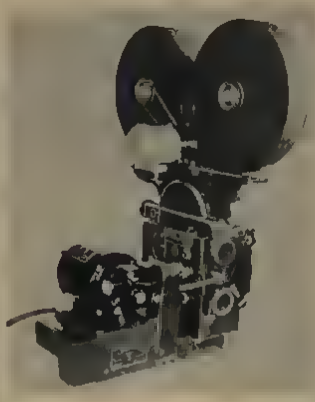
WHAT'S NEW

IN EQUIPMENT, ACCESSORIES, SERVICES



Bolex Conversion

A new Tel-Amatic Bolex magazine conversion is announced by S.O.S Photo-Cine-Optics, Inc., 602 West 52nd St., New York 19 Any Bolex Camera can now be used with Mitchell type 400′ and 1200′ loads where a continuous run of film is necessary, or where reloading of the camera on location is inconvenient. With a changing bag, unloading and loading of the film magazine is said to be simple If desired, 100′ or 200′ daylight-loading spools can be used in the external magazines. When a short run is required, or where light weight is needed for hard-to-reach locations, the magazine can be dismounted in a hurry 115-volt sync motor operates at 24 fps for accurate recording when used with a tape recorder, projector or phonograph Motor is mounted on separate base with on-off switch, reverse switch and 12′ heavy duty cable. The complete conversion consists of one 400′ Mitchell type magazine, cover plate (used when magazine is not on camera), torque takeup motor and belt, recessed rollers on mounting plate saddle block permanently mounted to Bolex Camera, bellows coupler to guarantee alignment, and heavy duty fibre case that holds all components Price complete is $495.00 plus $100 00 for footage counter. The Tel-Amatic synchronous motor drive separately with bellows coupling device and base is $195 00

Sun Gun Data

Sylvania Lighting Products, Division of Sylvania, 60 Boston St., Salem, Mass., offers free technical information on the company's new Sun Gun Professional photo light Especially informative is extensive data on the wide range of accessories now available for this lamp, such as diffusion filters, barn doors, snouts, etc., and how the cinematographer may use them to enhance his set lighting

Arriflex Battery Pack

The Arriflex Corporation of America New York, N Y., announces a new Voltabloc nickel-cadmium battery as a power source for Arriflex cameras The new Voltabloc battery comes in an impact-resistant, moulded, contour case It has a built-in switch to provide selectivity 8 4 volts at 8 ampere-hours for the Arriflex-16, or 16.8 volts at 4 ampere-hours for the Arriflex-35 New battery is composed of 14 Voltabloc nickel-cadmium cells, each in a steel case and hermetically sealed. They require no service and maintenance other than charging. Each battery has its own built-in miniaturized charger for maximum convenience and utility List price is $256 00.

16mm Inspection Projector

A new Oxberry high-speed 16mm inspection projector, designed without a film gate to prevent scratches and other physical damage to new prints, has been announced by Animation Equipment Corporation, 38 Hudson Street, New Rochelle, New York

Mounted on a 16″ x 32″ table with Formica top, lens of the projector is 42 inches above the floor permitting operator to work in sitting position

Continued on Page 460

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BRUSH BK 443 tape recorder, value over $300. Excellent, special $69.50

MAGNEMITE model 610C portable battery operated ¼" recorder, dual 3¾" track, mike, headset, list $255, special $79.50

HOLMES 35mm sound projector, 2000 cap 1000 watt lamp, 4" lens, less amplifier and speaker, excellent $295.00

HOLMES 35mm sound projector as above, in good condition, special $145.00

ACME, Beacon or Devry 35mm silent portable projectors, 500 watt lamp, excellent for screening work prints, your choice at remarkably low price, each $69.50

CAPITOL 16mm continuous projector, built in 9"x12" screen, 300 watt lamp, good condition, special $59.50

BODDE Background 4x5 slide projector, 2000 watt lamp, step-up transformer, stand, 9 ft by 12 ft translucent background screen w/frame. Value over $1,6'0. Excellent condition, specially reduced to $1,195.00

BELL & HOWELL model 185 sound projector built-in detachable speaker, excellent, value over $500. Special $269.50

BELL & HOWELL model 185 sound projector, built-in detachable speaker, B&H custom fitted sync motor, value over $750.00, specially reduced to $345.00

BELL & HOWELL model 399K Specialist projector w/special analyst single frame crank, hours counter, like new $425.00

B&H power amplifier and speaker, list $167.00, like new condition $69.50

BELL & HOWELL model 179 sound projector, w/12" speaker and cardomatic reel. Value over $600, excellent $225.00

Listings Continued on Pages 452, 458, 462 and 464

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PLAZA 7-6977

WHAT'S NEW

Continued from Page 458

When projection distance is 11 ft., illumination is 15 foot-candles on the screen, and the image is approximately 28 in. wide. Objective lens can be changed to give a larger image if desired.

Instead of a film claw, a rotating prism is used to provide intermittent optical action which stops each frame momentarily in the film aperture. Operator may inspect not only the picture but also perforation and sound track areas as well. An improved torque motor operates a tight wind take-up that takes both reels and cores.

"Super-Lab" Processor

A new line of film processors by Houston Fearless called "Super-Lab" incorporates 8 major improvements that increase operating speed up to 150 fpm.

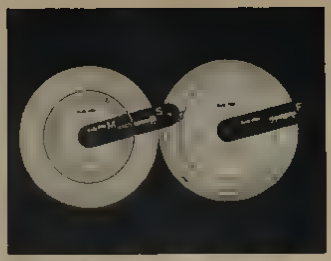
Finger-tip adjustment provides sensitive film tension control without tools; new roller assembly permits removal as a single unit for speedy cleaning; heat exchanger units attached to rear of chemical tanks maintain solution temperatures to within ±¼ degree F.; all tanks, chassis and exterior are of stainless steel. Filtered-air, impinge ment drying, film-end alarm, plus easy access grouping of operator controls are additional features of the new Super-Lab line.

Processing speed is variable from 5 to 150 fpm. Four basic models include: B&W negative-positive, reversal, color and microfilm. Film sizes accommodated are 16mm, 35mm, and 70mm. Manufactured by Westwood Division Houston Fearless Corp., 11805 W. Olympic Blvd., Los Angeles 64.

16mm Film Computer

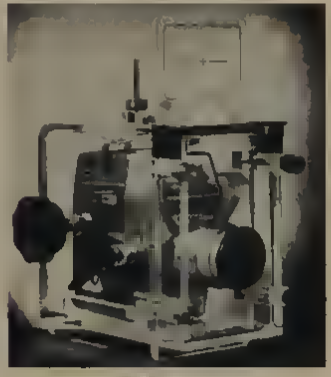
Rolah Laboratories, Sandy Hook, Conn., now offers a 16mm version of its famous Ready-Eddy film computer.

The new computer is same size as the popular Ready-Eddy 16/35. However, the 35mm space of the latter has been replaced by additional 16mm information, resulting in an increase in accuracy. For example, the 100 feet column is now divided into 200 divisions of one half feet.



There are three scales marked "F" for feet, "S" for seconds and "M" for minutes. An indicator may be rotated and lined up with any number on these three scales. On the "F" scale minutes and seconds of screen time as well as number of frames for the footage will appear in the window. On the "S" scale footage and number of frames may be read, on the "M" scale footage and screen time may be obtained up to 1638 feet, or 45½ minutes.

Made of durable laminated plastic it is small enough (5" in diameter) to be carried in one's pocket. List price is $2.95 at camera equipment dealers.



Underwater Blimp For "8's"

Bell & Howell Co., Chicago, announces an underwater housing for its line of 8mm cine cameras in the Director series. Non-pressurized housing has parallex correcting sports-style finder and external controls for film advance, zooming and winding. It will function at depths down to 60 feet and is just buoyant enough to float to the surface if released. Said to be the first underwater housing to be offered as standard equipment by an American camera manufacturer, it is priced at under $100. ■

QUALITY Equipment...BETTER Pictures

For the AMPLIFIER with Feet* use Lightweight TRANSIST-O-SOUND

This high fidelity amplifier now used in over 90 TV stations and locations. Its portability permits sound-on-film newsfilm where previously only silent coverage was possible.

TWO CHANNEL self contained unit. Illuminated VU meter for right and left. Wt. 3½ lbs. $350

ONE CHANNEL in camera unit. Illuminated VU meter. External power supply provides all power, including 110 V. A.C. Added weight to camera, 6 ozs. Power supply weight, 6 lbs. $550

Frequency response is flat within 1 db from 20 to 15,000 cps, equalized for the Auricon galvanometer. Mike input receptacles are Connon XLR type, standard on present day audio equipment. No cables, other than AC and mikes—everything including track supply in one case, mounted on your camera. One mike control switches on both amplifier AND track current permitting 'blooping' of track as you go. Seven transistors used in an RCA licensed circuit. Separate meter for track lamp current AND amplifier battery check.

*WHOSE FEET? Why yours, of course

BETTER TITLES with TEL-AnimaPrint®

Greatest dollar for dollar value in the industry!

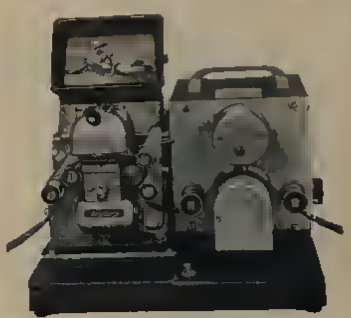
The versatile Hot Press Title Machine for high quality, fast, dry lettering. The most intricate and tricky titles in any color or black-&-white are achieved with ease on paper or acetate cells—main titles, sub-titles, trailer titles, TV commercials, slide films, super-imposed sub-titles, shadow and third dimensional effects, etc. These may be applied to any kind of art, scenic or live action background, including photographs. Prints dry from colored foil for instant use.

ELECTRONIC TEL-AnimaPrint®—Type heated at constant rate automatically despite changes in room temperatures. Accuracy within + or — 1° by Thermistor (Fenwal's Patented Control Unit) $595

STANDARD TEL-AnimaPrint® with manual control $495

SAVES Film...SAVES Time...
SAVES Eyes...SAVES Money...

EDIOLA® ACTION VIEWER and SOUND READER



Most advanced Professional Action Viewer—has many exclusive improvements —all nylon rollers and flip-top with cue light. Big, clear image 3" x 4", remains sharp whether film is moving or stopped. Can be synchronized with Sound Readers.

S.O.S. Ediola M 16 Jr. Action Viewer	$ 99.50
S.O.S. Ediola M 16 Sr. Action Viewer with pressure plate and double pad rollers (left to right)	$135.00
S.O.S. Ediola MRL 16 Sr. Action Viewer with pressure plate and double pad roller (right to left)	$195.00
S.O.S. Ediola Pro 35 for 35mm	$295.00
Model MA Pro 8 Viewer for 8mm	$ 89.50

S.O.S. PHOTO-CINE-OPTICS, INC.

formerly S.O.S. CINEMA SUPPLY CORP.

602 W. 52nd St., N.Y. 19, N.Y.—Plaza 7-0440—Telegram "FAX, N.Y."
Western Branch: 6331 Hollywood Blvd., Hollywood 28, Calif.—Phone 467-2124

CAMERA MART SALE ON LIGHTING EQUIPMENT

COLORTRAN Spot kit w/3 spot heads, one broad light, four stands, snoots, scrims, case, new Junior mark II converter, value over $325.00, special **$225.00**

COLORTRAN Junior kit with two Jr. heads and stands, case, new Junior mark II converter, value $275.00, special **$175.00**

REGAL converter, heavy duty model to boost 2KW lamps, new list $65 00, net **$49.50**

GARNELITE converter will handle 4 Par 56/300 watt lamps, individual rheostat control for each light, list $145 00, special **$89.50**

FREZZOLITE model 210 portable newsreel light w/reflector, power supply, batteries and charger. List $250 00, new **$179 50**

BARDWELL 5KW spot w/barndoors, list $275 00, excellent, special **$95.00**

BARDWELL 2KW spot w/barndoors, list $275 00, excellent, special **$95.00**

CENTURY 2KW spot head, only **$39.50**

CONELIGHT 2KW head, only **$75 00**

QUADLIGHT for 4 bulbs w/stands, individual control switch for each **$59.50**

MOLE or **BARDWELL** single broad light w/stand, value $98 00, excellent **$35.00**

MOLE or **BARDWELL** double broad light w/stand, value $155 00, excellent **$65.00**

FLUORESCENT light unit, 6 bulb type, ideal for flat or fill. Mount on stand or hang from overhead New cost to govt $350.00 Special **$14 95**

DIMMER Vitrohm type non-interlocking, may be used singly or mounted in banks, type 71-110, 2KW dims down to 1650 watts list $95 00, new, special **$49.50**

CARTER generator convert 12v DC to 110v AC 60 cycle, 150-watt capacity, list $145.00, new special **$89.50**

LAFAYETTE amplifier and speaker, use with projector or PA system, special **$19.95**

POWER amplifier and speaker, 30 watts, ideal hook up with studio sound system. Value over $350 Special **$49.50**

Listing Continued on Pages 452, 454, 45E, 460 and 464

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BEHIND THE CAMERAS

WHAT THE INDUSTRY'S CAMERAMEN ARE SHOOTING LAST MONTH

BY MARION GUGHINS

NOTE Asterisks following titles indicate television film productions.

AMERICAN INTERNATIONAL

FLOYD CROSBY, ASC, "The Young Racers" (Pathe color, shooting in Monte Carlo) with Mark Damon and Luana Anders. Roger Corman, producer director

BILTMORE STUDIOS — N Y

JACK PRESTLY, "Naked City"* (Screen Gems).

BIOGRAPH STUDIOS — New York

GEORGE STOETZEL, ASC, "Car 54 Where Are You?"*,

CASCADE STUDIOS

HENRY FREULICH, ASC, Commercials*
ROY SEAWRIGHT, Commercials*

GEORGE FOLSEY, ASC Commercials*.

ELWOOD BREDELL, ASC, Commercials*

HAL MOHR, ASC
Photographing The Men From The Diners Club, starring Danny Kaye, at Columbia Studios

COLUMBIA STUDIOS

ALAN HUME, "The Iron Maiden" (GHW Prod., shooting in England) with Michael Craig and Anne Helm Gerald Thomas, director

HAL MOHR, ASC, "The Man from the Diners' Club" (Dena Ampersand Prod.) with Danny Kaye and Cara Williams Frank Tashlin, director

GORDON AVIL, ASC, "Mr Smith Goes to Washington"*

FRED GATELY, ASC, "Higgins"*

GERT ANDERSEN, ASC, "Dennis the Menace"

JACK MARTA, "Route 66."

ARTHUR GRANT, "The Old Dark House" (Wm Castle Prod., Hammer Films color, shooting in England) with Tom Poston and Robert Morley William Castle, director

WILKIE COOPER, "Maniac" (Hammer Films, shooting in England) with Kerwin Mathews and Nadia Gray. Michael Carreras, director

DOUGLAS SLOCOMBE, "The L Shaped Room" (Romulus Films, Ltd., shooting in England) with Leslie Caron and Tom Bell. James Woolf, director

JOSEPH BIROC, ASC, "Bye Bye Birdie" (P'Vision Eastman color) with Janet Leigh and Dick Van Dyke. George Sidney, director

CHARLES WELBORN, "Empire"*

FRED YOUNG, "Lawrence of Arabia" (Super P'Vision, Eastman color Horizon Pictures (GB); Columbia release, shooting in Spain) with Alec Guinness and Anthony Quinn David Lean, director

DESILU—Cahuenga Studio

HENRY CRONJAGER, "The Joey Bishop Show"*

SID HICKOX, ASC, "The Andy Griffith Show"*.

DESILU—Culver City

LOTHROP WORTH, ASC, "The Real McCoy's"*

CHARLES STRAUMER, "The Untouchables"*.

DESILU—Gower

TED VOIGHTLANDER, "Ben Casey"*

EDWARD FITZGERALD, ASC, "Lassie"*

ROBERT PLANCK, ASC, "My Three Sons"*

LUCIEN ANDRIOT, ASC, "Fair Exchange"*

NICK MUSURACA ASC, "The Lucy Show"*

WALT DISNEY PRODUCTIONS

GUNTHER ANDERS, "The Miracle of the White Stallions" (shooting in Vienna) with Robert Taylor and Eddie Albert. Arthur Hiller, director.

EDWARD COLMAN, ASC, "Son of Flubber" with Fred MacMurray and Nancy Olson Robert Stevenson, director

FILMWAYS — MGM

TOM TUTWILER, ASC, "Shell's Wonderful World of Golf"*

FILMWAYS—New York

MORRIS HARTZBAND, "The Defenders"* (CBS) Boris Sagal and Buzz Kulick, directors.

FOX WESTERN AVENUE

JAMES VAN TREES, ASC, "Dobbie Gillies"*

INDEPENDENT

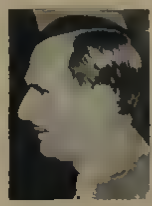
WALTER LASSELAY, Tom Jones" (UA release, Eastman color, shooting in England) with Albert Finney and Susannah York Tony Richardson, producer-director

J BURGI CONTNER, ASC, "Light Fantastic" (Seneca Prods shooting in New York) with Dolores McDougal and Barry Bartle. Robert McCarty, director

DON MALKAMES ASC The Terrible Truant" (Barbro Prods shooting in New York) with Lee Grant

LUCIEN BALLARD, ASC, "The Caretakers" (Hall Bartlett Prod., UA release) with Robert Stack and Polly Bergen Hall Bartlett, producer director

Continued on Page 464



JOSEPH BIROC, ASC
Shooting "Bye Bye Birdie," in Panavision and Eastman Color at Columbia Studios George Sidney directing

Murray Naidich 2-1

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REWIND is our free monthly publication—a direct communications link between the *processor* of film and the *producer* of film; both of us seek technical perfection in the finished prints. Here are a few sample articles from recent or forthcoming issues of REWIND:

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"Status of 8-mm Release"
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BELL & HOWELL 35mm model D printer, semi-automatic, 21 light scene change, 5 aperture gate Excellent. Value over $4000. Special $1,795.00

NEUMADE film storage cabinet w/ doors, holds 200-400 x16mm reels, 20-1000'x35mm reels, list $325.00 Special $149.50

NEUMADE FW-1 film waxers 16/-35mm, clamp to work table. List $45.00, net. $7.95

YOLO automatic dissolves for Cine Special camera, 40 frames, simple installation. List $45.00. Special, new $32.50

NCE collapsible aluminum slates, insert numbers List $40.00. New, special $29.95

AURICON auto-parallax finders, matte type. Excellent. Special $49.50

REMINGTON Portograph print box with automatic timer and electric dryer Photocopy use List $300 New $95.00

FILM SLITTER, motor drive, 8/-16mm, value $450.00 Special $79.50

ART TABLES tilt top, rotating animation disk, light box, back shelf, drawer. Value over $250.00 Special $75.00

CAMERA MAGAZINES:

B&H EYEMO 400' x 35mm, like new $69.50
400'x35mm, used 39.50
plastic type 29.50
FILMO 400'x16mm like new 125.00

B&H Standard 1000'x35mm, L N $110.00
1000'x35mm, used 89.50

MITCHELL 1000'x35mm list $205.00
new, special $110.00
used, special 89.50
1000'x35mm NC mag 110.00
400'x35mm excellent 49.50

ARRIFLEX magazines
200'x35mm, list $148, used $39.50
400'x35mm, list $210, used 99.50
Cineflex 200'x35mm 14.95
400'x35mm 29.50

Listings Continued on Pages 452, 454, 458, 460 and 462

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BEHIND THE CAMERAS

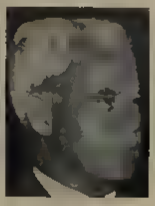
Continued from Page 462

INDEPENDENT

DANIEL L. FAPP, ASC, "The Great Escape" (Mirisch-Alpha Prod.; UA release, P'Vision & Color; shooting in Munich) with Steve McQueen and James Garner John Sturges, director.

STANLEY CORTEZ, ASC, "The Return of Mr H" (SANS Prod.; C'Scope & Color) with Audrey Caire and Walter Stocker David Bradley, director.

ERNEST LASZLO, ASC, "It's A Mad, Mad, Mad Mad World" (P'Vision-Technicolor; Stanley Kramer Prods.) with Spencer Tracy and Milton Berle Stanley Kramer, producer-director.



NICK MUSURACA, ASC
Now photographing "The Lucy Show" starring Lucille Ball at Desilu Gower studios It's Lucy's new TV film series

KEYWEST STUDIOS

FRED WEST, ASC, (Family Films) Series of Religious pictures

LA BREA STUDIOS

ROBERT HAGER Perry Mason"*

METRO-GOLDWYN-MAYER

JOSEPH RUTTENBERG, ASC, "The Hook" with Kirk Douglas and Nick Adams. George Seaton, director.

HARKNESS SMITH, "Dr. Kildare"*.

DALE DEVENMAN, "The Eleventh Hour"*.

WILLIAM SPENCER, "Sam Benedict"*.

ROBERT HAUSER, "Combat"*.

GEORGE KRAUSE, "Tunnel 28" (Walter Wood Prod., shooting in Munich) with Don Murray and Christine Kaufman Robert Siodmak, director.

PARAMOUNT STUDIOS

HASKELL BOGGS, ASC, WALTER CASTLE, ASC, 'Bonanza'*.

JAMES WONG HOWE, ASC, "Hud Bannon" (P'Vision) with Paul Newman and Melvyn Douglas Martin Ritt, director.

LOYAL GRIGGS, ASC, "Papa's Delicate Condition" (Emro Prod., color) with Jackie Gleason and Glynis Johns. George Marshall, director.

CLAUDE RENOIR, "Paris When it Sizzles" (Color, shooting in Paris) with William Holden and Audrey Hepburn Richard Quine, director.

FRANK PHILLIPS, "Have Gun Will Travel"*.

PARAMOUNT SUNSET STUDIOS

FLEET SOUTHCOTT, "Gunsmoke"*

REPUBLIC STUDIOS

WILFRID CLINE, ASC, "Saints and Sinners"*

CHARLES BURKE, "McKeever and the Colonel"*.

HOWARD SCHWARTZ, "The Lloyd Bridges Show"*.

RAY FOSTER, ASC, Commercials*.

GEORGE DISKANT, ASC, 'Dick Powell Show'*.

SEVUR STUDIOS

RUSSELL METTY, ASC, "Tammy and the Doctor" (Ross Hunter Prod., color) with Sandra Dee and Peter Fonda Harry Keller director.

RUSSELL HARLAN, ASC, "A Gathering of Eagles" with Rock Hudson and Mary Peach Delbert Mann, director.

JOHN RUSSELL, ASC, "Alfred Hitchcock Presents"*

SID HICKOX, ASC, "Jack Benny Show"*

WALTER STRENGE, ASC, "Wide Country"*

LIONEL LINDON, ASC, "The Virginian"*.

RAY FLIN, "It's a Man's World"*.

HARRY WAXMAN, "Lancelot and Guinevere" (Emblem Films Prod., P'Vision & Color; shooting in Yugoslavia) with Cornel Wilde and Jean Wallace. Cornel Wilde, director.

ROBERT BURKS, ASC, "The Birds" (Alfred Hitchcock Prods., shooting in Santa Rosa) with Rod Taylor and Jessica Tandy Alfred Hitchcock, producer-director.

CLIFFORD STINE, ASC, "The Ugly American" (Eastman Color) with Marlon Brando and Sandra Church George Englund, producer-director.

ELLIS THACKERY, ASC, "Wagon Train"*.

BENJAMIN KLINE, ASC, RAY RENNAHAN, ASC, "Laramie"*.

JOHN WARREN, ASC, "Going my Way"*.

TWENTIETH CENTURY-FOX

JOHN NICKOLAUS JR., "Spaceraid 63" (API) with Kent Taylor and Marie Windsor. Maury Dexter, producer-director.

SANTE ACHILLI, "The Condemned of Altona" (Titanus-Carlo Ponti Prod.; shooting in Germany) with Sophia Loren and Maximilian Schell Vittorio de Sica, director.

ENRICO GIGNITTI, "The Leopard" (Titanus Prod., Technicolor; Technirama, shooting in Sicily) with Burt Lancaster and Claudia Cardinale. Luchino Visconti, director.

ELLSWORTH FAEDRICKS, ASC, "A Woman In July" (Jerry Wald Prod. C'Scope & DeLuxe Color) with Joanne Woodward and Richard Beymer Franklin Schaffner, director.

LEON SHAMROY, ASC, "Cleopatra" (J. Mankiewicz Prod.; Todd AO; shooting in Roma) with Elizabeth Taylor and Richard Burton. Joseph Mankiewicz, director.

HAL STINE, ASC
At Warner Brothers Studio shooting 'Mr. Limpet,' feature film starring Don Knott and Carole Cook

WARNER BROS.

CARL GUTHRIE, ASC, 'Gallant Men"*.

ROBERT SURTEES, ASC, "PT 109" (P'Vision, color, shooting in Florida) with Cliff Robertson and Ty Hardin Lewis Milestone, director.

MARK DAVIS, ASC, "PT 109" Second Unit.

Continued on Page 506

CECO: THE INDUSTRY'S LARGEST "ASSISTANT-TO-THE-PRODUCER"

Many companies sell professional motion picture equipment.
Rent it. Repair it.
But none quite so much nor so varied as CECO.
This, in itself, is something we might well be proud of. And we are.
Yet our real pride has come when the young "pro" with little more than an idea . . . or the old "pro", who knew better than to think he knew all the answers . . . called us for technical assistance . . . and we were able to help.

The problems often have been staggering.
Sometimes relatively simple.
We didn't solve all of them.
But many.
A great many over the years.
Now, most "pros" ask us as a matter of habit.
We're more than happy to fill that "assistant's chair".
On problems large or small.
Ask us.
There are 25 years of good reasons why.

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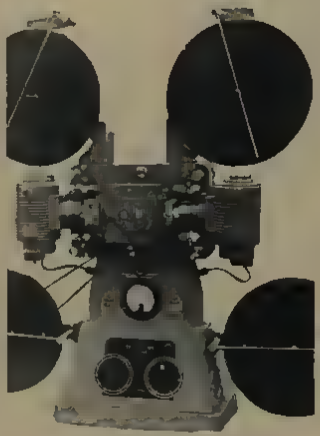


OPTICAL REDUCTION-ENLARGING PRINTER

Reduces 35mm to 16mm; enlarges 16mm to 35mm—color or B&W 1200-ft capacity Speed 1400 to 3500 ft per hour

35mm-16mm model	$2,475 00
16mm 8mm model	1 775 00
Comb 35mm continuous	1 945 00
Cinerediegraph 35/16mm	2,275 00

STRIP FILM PRINTER—35MM OR 16MM

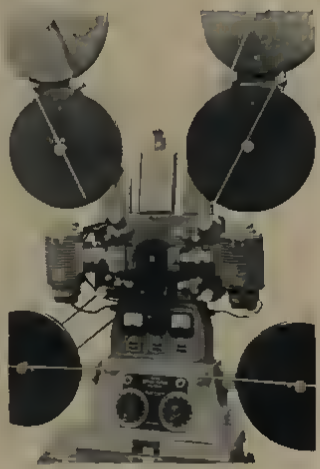
Custom built to assure perfect registration Accommodates looped negatives or rolls up to 1200 feet Maximum speed 1600 ft per hour

$1,325

8MM-16MM CINE FILM PRINTER

Improved model Makes sharp, brilliant copies of color or B&W cine films. A C operated, no batteries required Two rheostats afford range of 10 printer light densities

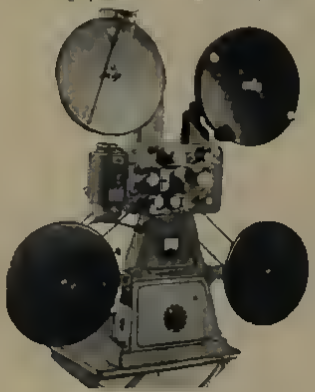
$195.00



COMBINATION 8MM AND 16MM CONTACT PRINTER

For printing sound and picture, single or double system, separately or simultaneously. Capacity, 1200 ft Speed 3000 ft per hr Perfect prints assured

$1,777.00



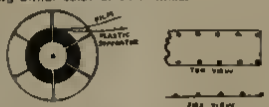
16MM-35MM MICROFILM PRINTER

Continuous contact printer for unperforated film 1200 ft capacity; prints 1600 ft per hour, 115 volts, 60 cyc A C

$920.00

DEVELOPING TANKS AND REELS

Stainless steel tanks and reels for processing either color or B&W films.

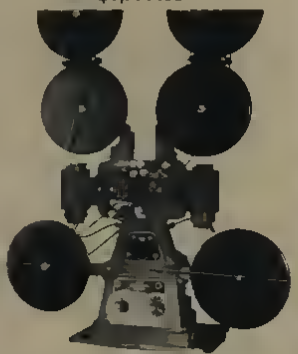


Features exclusive Uhler Plastic Separator strip which permits maximum distribution of solutions over film surface when used with wire processing reels

Complete, $50.00

Separate Components:

16mm tank	$16.95
8mm tank	11.95
16mm reel	18.95
8mm reel	12.95
16mm separator strip	14.95
8mm separator strip	6.95



16MM CONTINUOUS PRINTER

Improved comb printer for B&W, color, with single- or dbl system sound tracks Prints picture & sound simultaneously Capacity 1200-ft; speed to 1600 feet per hour

$1,295.00

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Q & A

Technical Questions and Answers

Q.—*Is there any great objection to shooting film in 16mm Kodachrome and blowing it up to 35mm Technicolor for theatrical release?*—A. V. Dhahran, Saudi Arabia

A.—None that we know of, providing that the photographic result is adequate to render an acceptable 35mm release print. Technicolor Corporation long has been noted for blowing up 16mm Kodachrome for 35mm release Some of Walt Disney's most notable films on wildlife are excellent examples of Technicolor's work in this respect

We should caution, however, that the success of such 16mm color film production depends considerably upon the quality of your photographic equipment and the skill and experience of the photographer.

Q.—*Is there any motor-driven 16mm cameras currently available, such as the Arriflex 16, Bolex with electric motor drive, and the new Kodak Reflex Special, that will give instant start to film instead of having to build up to speed? I plan to film football games where the length of film runs will exceed that afforded by spring-motor driven cameras, also, I do not want light flashes to occur between scenes where the camera must build up to speed*

A.—For the answer to your problem, we went to Joseph Mascelli, who has worked professionally with just about every 16mm camera on the market According to him, there is no electric motor driven camera (nor for that matter any electric motor that can be used with a spring-motor camera) that will come up to speed instantly as will a spring-motor drive The exceptions, of course, are animation and time-lapse motor drives where the motor runs continuously and moves the camera mechanism by means of a clutch when same is engaged for the period desired.

With a spring motor drive camera the spring is wound and ready to go, but is held in check by a release on the shutter. When the start button is depressed, the spring motor goes into instant action at the set speed.

Where an electric motor is used to drive a camera in place of its spring motor, the spring motor must first be disengaged so that the camera mechanism is free to operate with the electric motor. One result in such a hook-up is that the shutter can (and usually does) stop at any position, instead of fully closed, as in the case where the spring motor is used.

We have not investigated this, but it might be possible for you to adapt a time lapse motor drive, such as the one manufactured by National Cine Equipment Inc., 209 W. 48th St. New York 36, N. Y. Would suggest you write them and state your problem.

Q.—*Having shot 8mm movies as an amateur for a number of years, I am now planning to produce a series of scientific films in an umber of fields of research and industry, particularly in the medical and surgical electronics fields, which is my area of specialization.*

It is my belief that 8mm sound equipment and techniques are adequate for this sort of work, and I have considered purchasing a new Fairchild 8mm sound camera and accessories. Would this be adequate for producing the type films I am planning?—R. A. J., Montreal, Canada

A.—If your 8mm sound films are to be sold commercially—that is, you will be selling a number of prints of each film—this calls for photography and sound recording of the highest quality This is not always possible to attain when shooting 8mm for 8mm We know of no instance where there has been any successful commercial 8mm sound production with the photography done with an 8mm camera Most films intended for quantity release in 8mm, sound or silent, are photographed in either 35mm or 16mm, then reduced to 8mm in the printing Result is that pictorial and definition results are far superior to that of duplicated 8mm film.

The Fairchild 8mm Sound Camera is an excellent piece of equipment, but it is intended primarily for advanced amateurs and for industrial use where only one print—the original—will be required ■

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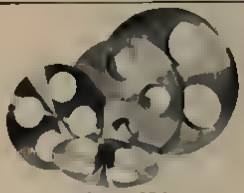

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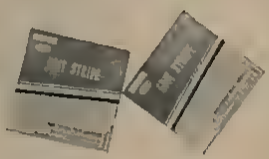

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Why Prints For

THE FINAL PRINT quality of a television film is determined primarily by the normal factors of composition, area, lens used, lighting and exposure, as in this scene being photographed for "The Danny Thomas Show," by Bob de Grasse, ASC It is one of the many TV film shows which General Film Laboratories processes and prints

IN THE PRODUCTION of motion pictures for television, whether in 35mm or 16mm, prints for TV transmission differ from those made for screen projection. This is because prints for TV must be tailored to fit the transmission and reproduction characteristics of the television system.

This requires special consideration and procedures, both in the photography of such films and in the processing and printing of same, as pointed out in recent issues of *Rewind*, monthly publication of General Film Laboratories.

Although the laboratory carries the responsibility for producing an acceptable television print, says General, the basic quality decisions are made on the set before any of the film reaches the laboratory.

In some film production circles, this is not yet fully understood. The ensuing paragraphs, condensed from *Rewind*, reflect General's extensive research and experience in this field:

The print intended for transmission over the television system starts with the same camera negative as the film intended for theatrical and other screen projection —but the lighting of the set and processing in the laboratory result in a different end-product that is better adapted to television requirements.

A special technique for photographing material to be broadcast involves a lower contrast ratio, and a need for a sufficient black reference and white reference in each scene—essential to good gray scale transmission. (The lightest area in the print becomes the white of the transmitted picture, and the darkest area becomes the black. The lack of such references—both black and white—can result in poor contrast on the home receiving set.)

As in any type of film production, the laboratory should be involved prior to actual production in the processing and evaluation of tests, so that the cameraman and the lab people are each familiar with their mutual requirements.

The factors that affect print quality in television films fall into three major areas:

1. *Production:* The eventual print quality is determined primarily by the normal factors of composition, area, lens, lighting, exposure, etc.
2. *Laboratory processing and printing:* All film handling and cleaning, development of the negative or other original film, printing and processing of the intermediate materials and the print.
3. *Projection:* Efficiency or condition of the projecting device, the screen, the lens, the light source—and the adapting of projection to the audience.

In the area of black-and-white production, the common-sense suggestions laid down in 1957 in "Laboratory Practices on Films for Television"† still apply and are worth quoting.

Under the heading "Black-and-White—Photography and Lighting for Optimum Quality from Film"

†*Ten page pamphlet published by the Association of Cinema Laboratories, Inc., 1905 Fairview Avenue N E, Washington, D C — prepared by a special committee chaired by William E Gephart Jr*

TV Are Different

Although films for television start with the same camera negative as do films for theatrical release, different set lighting and processing of the TV film is necessary to produce prints suitable to television's transmission requirements.

FOR VOLUME production of 16mm TV prints, General's 35/32mm system is used. Machine above slits two 16mm prints from a single width of 35mm film.

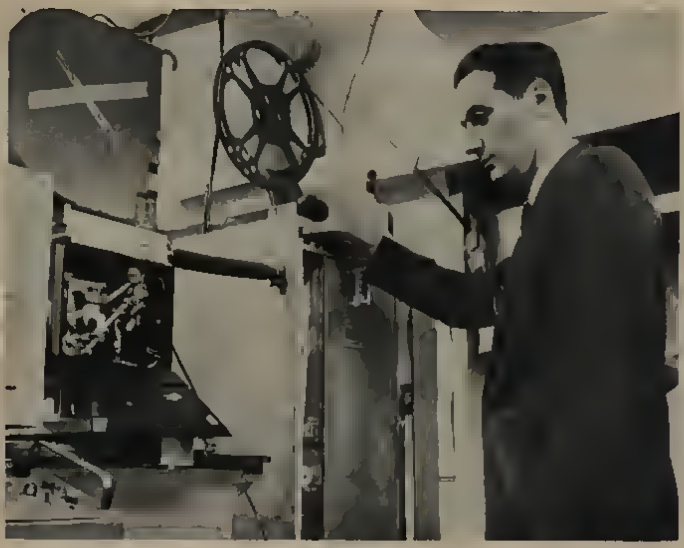
is the following:

Any recommendations for laboratory practices on films for TV should include certain recommendations for photography, lighting and production. The laboratory can achieve the best results with the aid and co-operation of the people in these fields.

1. Negative (or reversal original) should neither be underexposed nor overexposed, as set forth in film manufacturers' recommendations. This is particularly important when the faces or essential shadow detail are unavoidably at extremes of the brightness range.
2. The use of closeups and medium camera shots with only infrequent use of long shots is recommended. Wide angle shots and long shots should be used only to establish the perspective.
3. The ratio of key to fill lighting should be kept within the range of 1½ to 1 and 2½ to 1. The maximum brightness contrast in the scene, as read by reflectance meters should preferably not be greater than 20 to 1, but in any case should not be greater than 30 to 1. Uniformity of fill lighting throughout the scene is advisable.
4. Night effects should be achieved by proper use of lighting and set inferences, instead of requiring the printing down of day scenes for night effect, which is sometimes done for theatrical use.
5. Large areas of either white or black in the picture should be avoided wherever possible. Large areas of any uniform density are not advisable.
6. Backgrounds for titles, trademarks and inserts should not utilize large expanses of uniform, unbroken density, especially if the background is very light or very dark.
7. Cutting back and forth between scenes where the back-

Continued on Page 492

HERE NEGATIVES of TV films are assembled for printing by General Film Laboratories. Printing quality is held to fixed TV standards by means of punched tape timing control of the printer.



EXPOSED FILM moves directly from recording camera through light-tight tube into high-speed Viscomat 16mm film processor, where it is processed in 60 seconds.

SLOW

By JOSEPH HENRY

IT WAS THE NEXT to the last play of the first half in the Gator Bowl football game. Georgia Tech tried a crucial maneuver against Penn State. In a few seconds, the gun sounded to end the balf.

Just 280 seconds later, this same play, plus selected action recorded earlier, was shown in *slow motion* over the CBS Television Network during the balftime intermission.

Several months later CBS televised in *slow motion* tbe blastoff into orbital flight of Lt. Colonel John Glenn minutes after the Atlas missile and Mercury capsule soared out of sigbt.

In both instances the subject matter was pbotographed by a motion picture camera directly from a five-incb television picture tube carrying the actual telecast, and tbe film processed immediately and played back in slow motion at various speeds over the network. It was the first time this bad been done on television.

For tbis concept of achieving slow motion rebroadcasting, the CBS Television Network was subsequently nominated by the National Academy of Television Arts and Sciences for its Emmy award.

The CBS system utilizes 16mm motion picture film which is processed by recently-developed, bigh speed techniques. The introduction of this method during the 1962 Bowl games was made possible largely through the availability of a prototype model of the Eastman Viscomat Processor. This machine processes film to laboratory quality in approximately 60 seconds. At this writing, CBS has installed a production model Viscomat machine.

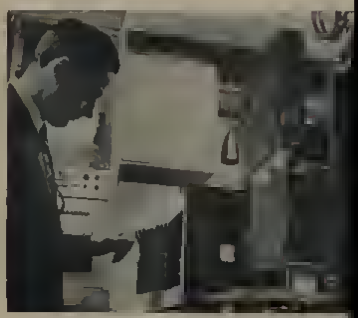
CBS's most dramatic results from slow motion playback of television film recordings undoubtedly were achieved with the two football bowl games. Processed in one minute in a continuous operation from camera to Viscomat, the film was projected at 12 frames per second for pass plays and eight frames per second for runs at the Gator Bowl, using an Eastman 16mm Continuous Television Projector Model 350. Halftime playbacks at the Cotton Bowl were telecast at four frames per second.

As a result, viewers clearly saw every detail of the plays unfold at reduced speeds never before possible on television. Previous recordings had been made at the regular television rate of 30 frames per second and by special modification could be slowed to 15 frames.

The Bowl games were handled in the following manner:

A Viscomat Model 10 processor was set up in CBS' TV recording department in New York. It was connected by light-tight tube to a Kodak Model 11 Television Recording Camera loaded with Eastman Television Recording Film, Type 7374. The camera was trained on a conventional five-inch television picture tube carrying the TV signal from the games in Jacksonville, Florida (Gator Bowl and Dallas, Texas (Cotton Bowl.)

Without a magazine tapeup, the



TO FACILITATE editing, scenes are slated by inserting a numbered lucite plate momentarily between camera lens and TV tube

MOTION IN TELEVISION

Utilizing motion picture film and fast processing, CBS-TV becomes the first in telecasting to achieve slow motion in TV broadcasts of live action events.

film ran directly from the recording camera through the light-tight tube into the processor where a viscous developer was uniformly spread over its emulsion side. The developer remained in contact with the emulsion until development reaction was completed.

Then, jets of 130° F water automatically flushed away the developer. A connecting electric heater constantly maintained the water temperature at precisely 130° F. A squeegee removed the water from the film, which was then subjected to a viscous fixing solution. A hot water spray washed away the solution and the film was completely dried as it passed through an air plenum system. Elapsed time: one minute.

During the operation, a sports department director, maintaining continual contact with TV recording, said "Take it" whenever he wanted a particular play. Immediately, a lucite plate with a scene number written on it was passed briefly in front of the picture tube to identify the desired sequence.

Meanwhile, a reporter was taking notes of the recorded action. The film, as it passed through the processor, was cut after the clearly visible scene number appeared. This did not interrupt the processing in any way. The processor is equipped with two independent takeup reels. Whenever one is filled and removed the other is threaded to take up the remaining film. A new reel replaces the one which was removed.

The films were brought to an editor, who cut them in timed sequences down to the desired frame, and spliced the sections together. Using motion picture film, the editor could see exactly what he was doing. As a result, editing took only about two minutes and was done precisely.

A messenger standing by was handed the spliced film. He rushed it up one flight of stairs to the CBS Telecine Department, where it was threaded onto an Eastman 16mm Continuous Television Projector, Model 350. Because the processed film was negative, the polarity of the electronic signal had to be reversed to project a positive picture.

While this was going on, the notes taken by the reporter were written into a commentary which was phoned to the press box at the scene of the games. Prompting boards were made up and the announcer recapped each play as it was shown over the network.

To add interest to the playbacks, the director ordered cameramen on the scene to scan the crowd for reaction shots and this live action was interspersed with the slow motion films. A similar procedure was followed for the two rocket blast-offs.

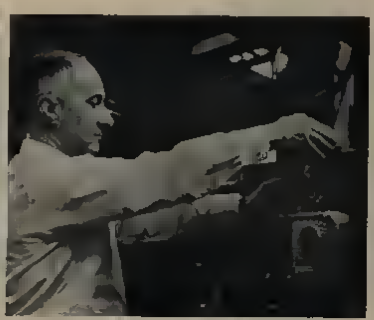
The continuous projector, which has no shutter, was equipped with a variable speed DC drive motor, enabling pictures to be telecast at any desired speed, even in stop motion. Quality of the playbacks were excellent. With film, there was no light flicker and splices could not be detected.

This achievement proves again

Continued on Page 506

WHERE PROCESSING of film is lengthy, filled takeup reel is readily removed and emerging film quickly clipped to another.

THE PROCESSED film is quickly edited and made ready for broadcast. Film is easier to read and edit than video tape.



EDITED FOOTAGE is threaded into Eastman 16mm continuous variable speed television projector for showing in slow motion over TV network.

Semi-Automatic Zoom

How one newsreel cameraman insures evenly-exposed zoom lens shots when filming under mixed light conditions ranging from bright sun to shade.

By SNUFFY McGILL

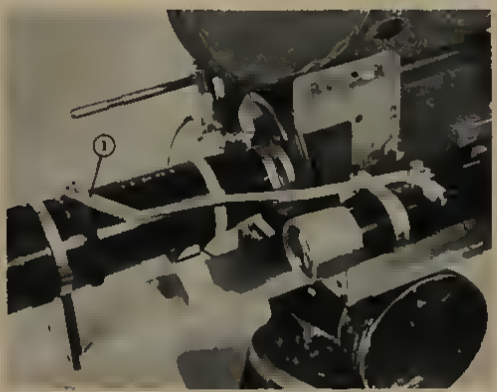


FIG 1—The Zoom control of the Auto Nikkor is linked with the variable viewfinder by the lever (1). In operation the camera operator slides the knurled knob (2) back and forth to change the focal length of the finder and zoom lens.

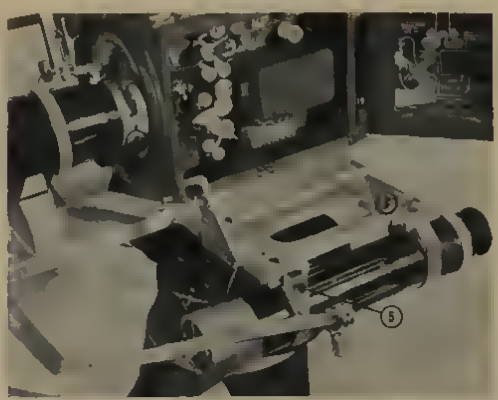


FIG 2—Disconnecting the zoom lever (1) and lowering the finder support bracket (3) permits easy access to camera interior for loading film. The Eyemo lens retaining ring (4) is shown mounted in the camera turret. A micrometer adjustment (5) permits raising or lowering the finder in lining it up with the field of the lens.

With zoom lenses virtually standard equipment today for newsreel and sports events cinematographers, one of the big problems is effecting quick focus change when panning from a bright open area to one in shade or vice versa. Some examples of the action and subject matter which invariably ranges between these two extremes in the course of a filming assignment are as follows:

1. Photographing horse races from a fixed position over the stands. The majority of running races start in full light and finish in the shadow of the stands. In addition, the longest focal length zoom lens for 16mm cameras captures only a barely discernible image on the back stretch, which is invariably several thousand yards from the grandstand camera position.

2. Most football games, when photographed from the grandstand press box, can be covered fairly well with a regular zoom lens. However, when the play is on the goal line or where a series of line plays are photographed there, it is almost impossible for the cameraman to see the ball carrier in the pile-up of players. As with horse racing, the important moments of action in the game often take place in the shaded areas of the field, especially during the waning hours of the afternoon. Also, professional football is quite often played in large municipal stadiums having second decks that add further to the shadow areas on the field.

3. Baseball action, for the fixed cameraman in the stands, presents every kind of lighting problem during day games. Using a normal zoom lens, it is impossible to pull in the action far out in the outfield.

4. Powerboat racing also poses serious exposure problems for the fixed position cameraman. Invariably the greater part of a race will be run against the light, and this problem combined with that created by the white spray of the "rooster tail," puts the cameraman at a disadvantage—especially when a spectacular spill takes place in bad light.

Where the budget for photography of such events is ample and several cameras with crews can be provided to overlap the action, cameras can be dispersed at the scene of the event to obtain the best possible footage, and of course good exposures. Here, assistant cameramen can "ride" the diaphragm over any lighting range with ease, following pre-arranged cues.

Lens Diaphragm Control

For the newsreel cameraman and freelance photographer, assistants and large camera crews are something you read about but never acquire. So it was that this writer, a freelance motion picture cameraman, set about to solve these problems with a semi-automatic f/ stop control and a maximum zoom telephoto lens.

Actually, it all started at a bull session at the Detroit Press Club. One of the photographers with a local newspaper had recently acquired a new Nikon Reflex still camera equipped with an Auto Nikkor 85-250mm telephoto zoom lens. He tossed a handful of beautiful sports stills he had taken with this camera on a table before a number of cameramen, including myself. All agreed the results were exceptional, that the Auto Nikkor was a remarkable lens. The thought occurred to me: would it be possible to adapt this lens to a motion picture camera for covering sports events? A thing like this will bug a cameraman until he just has to get a shot at it, no matter what the cost.

Not long afterward an assignment on the West Coast made possible a visit to Bud Bryhn of Bryhn Camera Service in Hollywood. Bryhn is an old timer in the mechanics of movie cameras, with plenty of Hollywood studio and lens savvy. I presented my problem. Bryhn was sure the lens adaptation could be done, but said his tight working schedule would allow him to work only irregularly on the project—which meant that no completion date could be promised at that time. His main problem, it seemed, was locating a zoom finder that would match the field of the Auto Nikkor zoom lens. However, he ultimately reached a solution, and the finder he designed is so carefully matted, there is barely two feet of overlay

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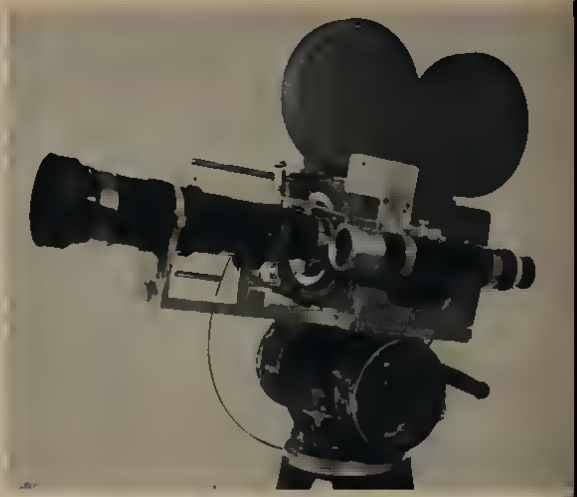

FIG 3—Author's Auricon Pro-600 camera with 85-250mm Auto Nikkor zoom lens added, along with the linkage that interlocks zoom with finder. The trailing cable is the diaphragm control link, shown in detail in Fig. 5. A sturdy base plate affords adequate support for the long focus zoom lens.

FIG 4—Looking down on the camera we see how the flexible cable that affords diaphragm control from the pan handle, is secured to a bracket mounted on the camera's blimping head retaining rods (6), and manner of securing it to the zoom control knob of the lens.

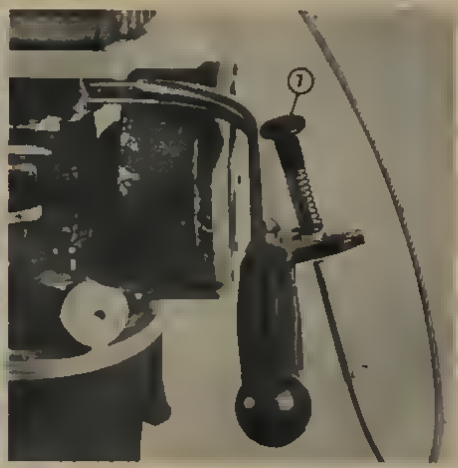

FIG 5—The flexible cable shown in adjoining photo extends to the pan handle where it is mounted conveniently to afford one-hand operation of both the pan head and the lens diaphragm control (7). —(All photos by author)

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BARRY K. BROWN, seated behind camera, photographs a scene for one of the many documentary films he made prior to producing and photographing "A Sky Full of People," his first theatrical film

MAKING A MARKETABLE MOVIE

How one ambitious young film maker with his sights on Hollywood found opportunity in the short subject field.

By CLIFFORD V. HARRINGTON

WHAT ARE THE chances for an independent photographer-director to make a theatrical film on a limited budget and get it shown in today's competitive market? Very good, according to 27-year-old New York movie maker Barry K. Brown, who has such accomplishment to his credit.

Brown's first short subject, "A Sky Full of People," opened in New York, along with the controversial British film, "The Victim," and is now scheduled for distribution to the nation's "Art" houses.

Brown's career rolled into high gear three years ago after he served a stint in the U.S. Army at the Army Pictorial Center in Long Island, New York. Previously he had been engaged in making industrial films, and after his discharge he decided that he needed even more on-the-job experience in the hard facts of movie making before he went into theatrical film production—something he could never learn in a school.

Clients soon found that the young man they were dealing with had definite ideas of his own. Their concept of the industrial film was a bit hazy. They imagined that such a movie was just a variety of shots strung together with a covering narration.

Brown convinced them that such films should include actors in dramatic situations with live sound recorded on location. The clients were inclined to go along with him, because he guaranteed to bring the pictures in on budget or absorb the losses himself.

To make his ideas work, Brown employed a blimped 35mm Arriflex and a Thomas hydraulic dolly —a combination that provided utmost flexibility in the photography. The dolly was used to speed operations between camera set-ups. He recorded sync sound on Ampex and Nagra tape recorders. He used an Electro-Voice microphone, which is highly directional, thus, cutting down background noises, to provide quality sound. With this basic equipment, Brown demonstrated he could shoot good sync sound footage on location.

From the beginning, an important objective, said Brown, was to obtain acting and dialogue of theatrical quality; to capture complete naturalness in the performances of his actors. To attain his ends, Brown's scripts were written "loose" to provide for improvisation of dialogue and action. He and his actors spent many hours and sometimes several days discussing a script before going before the camera. Only when the actors were thoroughly prepared would Brown begin his shooting schedule.

"We were friends, before we started," Brown said. "One of the major failings in motion picture making today is the fact that the director and his actors are often thrown together not long before production begins. This never happens on the stage; by the time rehearsals are finished and the play goes on everyone knows each other."

After three years in industrial film production, Brown felt that he was ready to venture forth into theatrical film production. He wisely concluded that his initial effort should be a dramatic short subject. He could do this more easily and much more cheaply, because it could be filmed on location.

Continued on Page 498

WITH THE CAPITOL building in the background, the 'Advise & Consent' company runs through opening shot of the film Senator Stanley Dante (Paul Ford) buying paper from newsboy. New type concave dolly tracks were used, which lent increased maneuverability to the balloon-tired camera dolly

CAMERAS AT

By HERB A. LIGHTMAN

THE PHOTOGRAPHY OF "Advise & Consent," as in other Otto Preminger productions, is one of the film's outstanding assets. This is because Preminger, who understands the capabilities of the camera as do few directors in the industry, thoroughly preplans every production with the camera in mind. Because he has found in Sam Leavitt, ASC, a cinematographer who is both appreciative of his ideas and imaginative in the execution of them, Leavitt was again behind the cameras for Preminger in filming "Advise & Consent." Leavitt has previously photographed five other pictures for the volatile producer-director: "The Billy Mitchell Story," "Carmen Jones," "The Man With The Golden Arm," "Anatomy of a Murder," and "Exodus."

Preminger is happiest when he can shoot a picture mostly, if not entirely, in actual locales—as he did with "Anatomy of a Murder" and "Exodus"—both of which received Academy award nominations for cinematography. Most of "Advise & Consent" was photographed in and around Washington, D.C., locale of the story, using a semi-documentary, fluid style of cinematography which Preminger and Leavitt together have developed to something of a science. Not only is this unique photographic approach dramatically effective but it makes it possible to film a "big" picture on a much shorter schedule and with correspondingly lower budget than if conventional methods were used.

Briefly described, the basic technique consists of filming large segments of action in one continuous take, with as many as twenty-five or thirty separate compositions linked together, either by dollying the camera into various positions or moving the actors up to or away from the camera. In this way Preminger gets on film in one stroke and with unmatched speed a portion of the script that another director

SAM LEAVITT'S camera crew in action making a running shot of Eddie Hodges on bike. Capitol dome looms in background for an effective backdrop to scene, at same time giving identity to the locale

THE CAPITOL

Sam Leavitt, ASC, encountered same unusual location problems in photographing Otto Preminger's "Advise & Consent" in actual locales in the Nation's capitol.

might shoot in as many as twenty separate time-consuming set-ups. So sure is he of what he wants in terms of ultimate editing structure and pace that he finds it unnecessary to shoot cover shots for protection. Only when the rhythm of a particular sequence demands the impact of a quick cutaway or reaction shot will he film an extra closeup to intercut with the master scene.

Preminger's method of shooting many cuts in one continuous take may, at first, sound deceptively simple. Actually it requires meticulous pre-planning and the ability to visualize accurately in advance the final effect of multiple images flowing one into another. It also demands top professional actors capable of sustaining consistently excellent performances throughout a large block of action while moving smoothly from one precisely marked position to another. But most of all, it requires a cinematographer so highly skilled that he can instantly find a photographic solution to whatever seemingly insurmountable location problem may arise.

Sam Leavitt, who thrives on such demanding as-

Continued on Page 502

HISTORIC RECEPTION ROOM just off the Senate Chamber was a key location for "Advise & Consent." Here may be seen the pattern of lighting set up by cinematographer Sam Leavitt to achieve studio-quality photography in this location interior

THE DOLLY MOUNTED camera follows actor Charles Laughton, who plays Senator Seab Cooley in 'Advise & Consent,' as he walks completely on the Capitol grounds, location site for the production. Famed Washington Monument looms in background

DIRECTOR OTTO PREMINGER watches camera crew ready the camera and lights for a take in the gallery of the Senate Chamber—one of the few sets erected on sound stage for the picture. Note the arrangement of lighting units necessary for illuminating the huge set

REEL & CAN STORAGE RACK

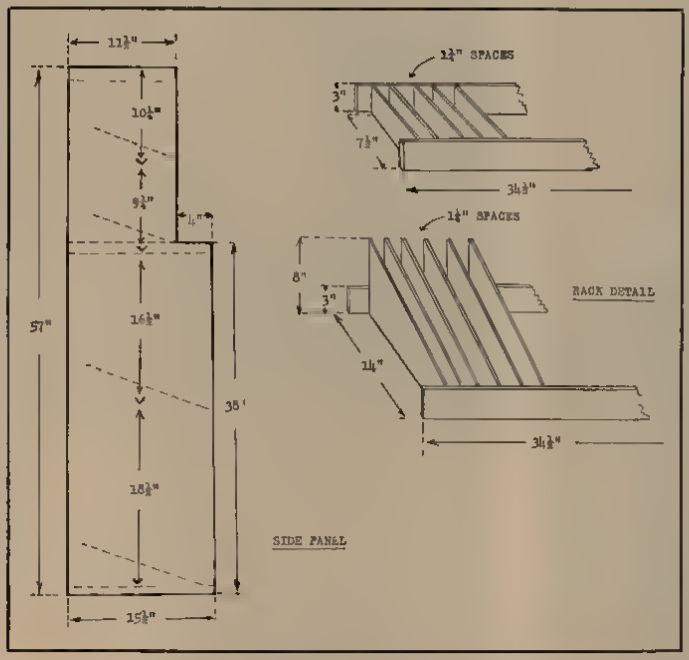
Want safe, orderly storage for your films? Here's a simple plan for building a rack that will hold up to 88 reels and cans in various sizes.

By RICHARD P. HERZFELD

A PROBLEM ALL film makers encounter sooner or later is that of film storage. For the non-professional who shoots movies infrequently this is not serious. However, after one accumulates twenty to thirty or more reels, then the customary stacking of reels and cans on a shelf becomes inadequate. Moreover, the combined weight of reels and cans also may be a hazard for the shelf. And so often when a film is wanted it is invariably in the can at the bottom of the stack, which means taking them down from the shelf one or two at a time.

Professional film storage equipment consists of steel shelving with metal upright dividers so that the reels can be held separately and easily stored or removed. Of course, a cabinet of this nature is quite expensive. The rack herein described can be made in various sizes to suit the needs of the user at comparatively small cost. The construction is quite simple and can be done by anyone who is reasonably handy with woodworking tools. A power saw would be desirable but is not essential.

CONSTRUCTED of plywood and braced with angle iron, this easy to build rack holds up to 88 16mm reels and cans.



DETAILS for construction of side panels and racks.

The main factor of importance in this design is that the weight of the reels is supported entirely on angle irons. The dividers for each shelf are made of ¼" plywood and merely serve to support the reels and cans so they will remain upright. Each space can be numbered and a card file or numbering system set up which will simplify the location of every reel.

It is important that the vertical space between the angle irons be sufficient so that when a reel is removed over the shelf edge, it will not strike either the shelf edge or the angle iron above. These distances naturally vary with the size of the reels to be stored.

The storage rack detailed in the accompanying drawings will accommodate 44 four-hundred foot reels of 16mm film on the two upper shelves and 44 eight-hundred to two-thousand foot reels on the lower shelves. This rack can, of course, be improved in appearance by enlarging the side pieces so doors may be added.

Continued on Page 500

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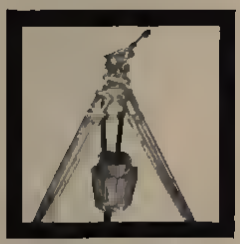

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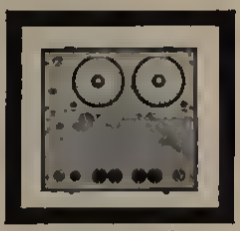

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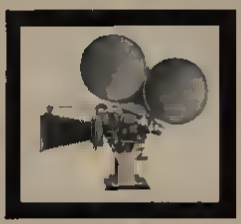

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ONE OF VENEZUELA'S many beauty spots photographed by Leo Ozols for series of documentary films for a commercial sponsor. Shooting Eastman Color negative, Ozols used three cameras: an Arriflex 35, Cineflex, and a B&H Eyemo "Q"

LEO OZOLS checks still camera as he prepares his equipment for a day of shooting in rugged region of Venezuela. He and crew members often slept in tent which also served as quarters for script-writer. Shooting of series of documentaries was virtually "off the-cuff"

Challenging Assignment:

Shooting 100 Documentaries In 50 Weeks

By LEO OZOLS

Organization Leo Ozols, Merida, Venezuela

ALTHOUGH VENEZUELAN INDUSTRY is increasing its use of motion pictures for advertising and promotion, the native producer of such films is beset with many problems in the course of their production. This is especially true where a sponsor undertakes an extended program of films and requires them to be delivered according to schedules that would be considered extremely rigid by U.S. film producers.

Recently the manufacturers of Cerveza Polar, a popular Venezuelan beer, decided to promote its product through a series of short documentary films. In essence, they were to be the equivalent of TV commercials, except that they would be longer and shown in theatres, and would have less of an advertising format.

When our production company received this sponsor's contract calling for 100 four-minute color documentaries to be delivered at the rate of two a week, it was vital that we plunge into production almost instantly. Some of the major problems we faced were: 1) insufficient time to prepare scripts; 2) the inadequacy of local color film laboratories; 3) a budget of 800 feet of Eastman Color negative for each documentary; and 4) filming delays caused by bad weather.

LEO OZOLS, a leading documentary and industrial film producer of Venezuela, who relates here his experiences in producing a hundred short documentaries in 50 weeks

As we sized up the situation, it was obvious that we would have to work with light and extremely versatile equipment and with a small basic crew. The latter consisted of a driver for the car we were to use, who also served as a combination electrician, prop man and all around handy man; a cameraman who also acted as guide, film editor and cutter; and a director who had to write scripts on the spot, as we went along.

The sponsor permitted us two

weeks in which to turn out two pilot films in the series. Geared to produce two films per week, according to our contract, we completed shooting the two pilot films on this time basis, which left us a week in which to get a start on scripting other films that were to follow. We even planned to start shooting another film at this time, but bad weather set in and put an end to this operation. When we returned to Caracas, we learned to our dismay that the film laboratory there was not equipped to do color film processing on a 24-hour basis. Until now there had never been a demand for such service (the bulk of their work was in black-and-white) and the laboratory set aside only one day a week for processing color film. So we had to ship our negative to a New York laboratory and wait 72 hours for work prints. Despite the fact we were four days late delivering the two pilot films, the sponsor was pleased and we proceeded with production of the remaining films.

For this challenging job, we used an Arriflex 35 camera for which we had a 1000-foot magazine with auxiliary motor-driven takeup. We also brought along a Cineflex camera and a Bell & Howell Eyemo "Q." The latter was used whenever we encountered lack of electric power to drive the Arriflex and Cineflex. For illuminating location interiors, we carried six Mole-Richardson 2000-watt lamps and light bars fitted with 3200° K lamps.

Thus equipped, we set out optimistically on our first trip, hoping that we might shoot footage for as many as 10 documentaries in two weeks' time. To do this, we traveled by night, slept little, rose early to look over each new location, and wrote scripts until noon. Immediately after lunch each day we started shooting. Meanwhile, our driver would make short excursions in search of interesting scenery or subjects to shoot. The

Continued on Page 496

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TO MAKE TRICK shots, one camera can be mounted upside down, as shown here, to provide a record of the action that will appear on the screen in reverse. Here the dual camera mounting plate is mounted off center on the tripod to enable the upside down camera to clear tripod leg

DUAL CAMERA PHOTOGRAPHY

With simple dual camera maunt, ane cameraman handling two cameras maunted an ane tripad can dauble his shat autput, film carrespanding scenes upside dawn far trick effects, ar record the same scene in twa different farmats using lenses of different facal lengths.

By FRED FOSTER

A DUAL CAMERA MOUNTING plate now on the market makes it possible for a lone cameraman to operate two cameras simultaneously without restricting his ability to pan or tilt. When shooting action that is unrehearsed and not repeatable, as for example most sports events, or when shooting a scheduled news event, better coverage can be had by employing two cameras.

The cameraman can simultaneously make wide-angle and telephoto shots, or one camera can be operated until its supply of film is exhausted, then the second camera used to continue covering the event without interruption. Using a twin-camera setup in shooting football games, the double-film capacity makes it possible for the cemeraman to record every down and have time to re-load the empty camera during "time outs" or between quarters.

Designed by veteran cinematographer Roy Zeper and marketed by Zeper Industries, Philadelphia, the dual mount shown in use in the accompanying photos readily fits any standard tripod having the conventional quarter-inch camera locking bolt. The Zeper dual camera plate is secured to the tripod by means of this bolt and the cameras are mounted on the plate at either side. Sufficient space has been provided between the cameras to permit winding motor springs or for mounting electric motors.

The plate, which is made of heavy-duty, tempered aluminum has several threaded and unthreaded holes appropriately spaced for securing cameras of different makes and to prevent the plate from pivoting. One series of holes permits positioning the plate off-center on the tripod—useful when mounting two cameras of dissimilar weight, or to permit a camera to clear the tripod legs when it is mounted upside down for reverse-action filming.

When shooting with two cameras at the same time, where lenses of dissimilar focal length are used, the operator should line up his shot through the finder of the camera with the longer lens, Zeper points out. This is because the narrower field of view is more critical.

Methods of starting and stopping two cameras simultaneously, when the Zeper device is used, is left to the discretion of the cameraman. This can be done with the aid of cable releases, electric push-

Continued on Page 498

A DUAL CAMERA set up, employing the Zeper camera mounting plate, for shooting wildlife in simultaneous long and closeup shots. A single electric switch controls the motorized cameras

"building blocks" for sound engineers

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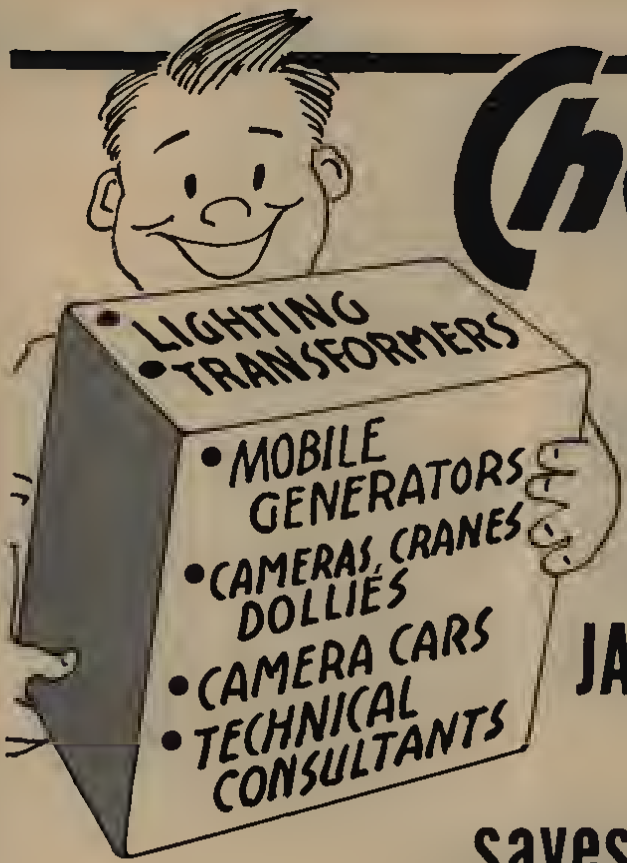

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THE MOVING CAMERA, mounted on crane, dolly or camera car, is part and parcel of the technique of achieving good composition in cinematography. Here the dolly-mounted camera is used effectively for a shot for Columbia Pictures' "Experiment In Terror," photographed by Philip Lathrop, ASC (Photo by Van Pelt)

PICTORIAL COMPOSITION—KEY ELEMENT IN CINEMATOGRAPHY

To achieve a high level of technical and artistic perfection in your photography, give more than ordinary thought to composition in each camera set-up.

By CHARLES LORING

PICTORIAL COMPOSITION, as it applies to motion pictures, is something which too many of our new generation cinematographers avoid in the belief it is well over their heads and far too complicated to understand except by veteran cameramen. However, before a motion picture photographer can hope to progress to the full professional level of cinematography, he must know the basic rudiments of composition and how to apply it in his work.

This need not be a discouraging thought. It does not mean long hours spent in studying the elements of composition. Surprising enough, most serious photographers doing advanced work with their cameras are fairly well versed in the elements of composition by virtue of a natural born artistic instinct, which is invariably found in those who love photography. So we can skip some of the elementary stuff and go right into a discussion of practical composition as applied to motion picture photography.

Pictorial composition for the screen differs from that employed in almost any other art form mainly because it is essentially *fluid* rather than *static*. By fluid we mean that it constantly changes as the camera and the elements of the scene move and change spacial relationship.

The moving camera — mounted on crane, dolly or camera car — is part and parcel of the moving picture. The camera should be free to move for the purpose of following action or emphasizing a situation. Similarly, players should be free to move within the frame so that the action will not be restricted. Static compositions in which the players dare not move for fear of disturbing the compositional balance are deadly to the motion picture. One might just as well film a series of still pictures.

Screen composition, then, is a constantly changing thing—but it has its rules and can be controlled quite precisely through proper coordination of camera and action. The cameraman's one never-changing element in composition is the frame itself—a rectangle of approximately 3 to 4 proportion (except in wide-screen photography) into which everything in the picture must be made to fit harmoniously. The cinematographer must learn to look at every new screen situation in terms of how it will will appear when set in a horizontal space of the above proportions.

The frame itself is a prime compositional element into which the

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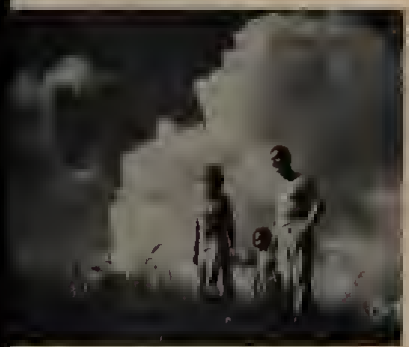

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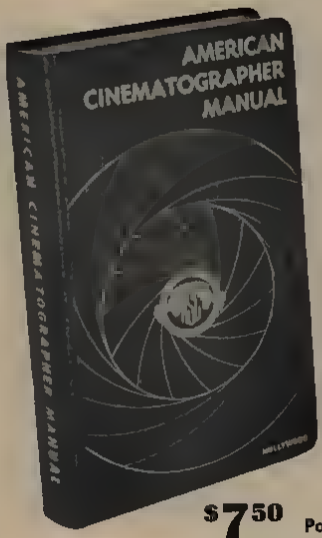

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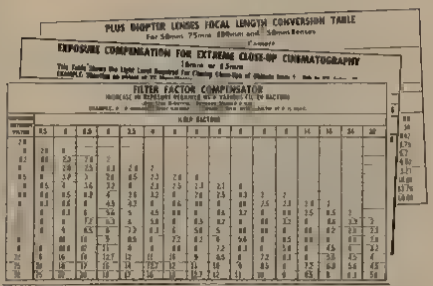
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PICTORIAL COMPOSITION—KEY ELEMENT

Continued from Page 487

other elements fit, and by moving the frame lines in relation to the subject, any number of different compositions can be achieved. You can profitably experiment at times by trying different patterns of framing before actually shooting the scene.

The rule of "thirds" is a basic principle of composition in all of the graphic arts, but it applies particularly to motion pictures, especially in long panoramic shots which embrace a good deal of area and many separate details In applying this rule, imagine that the screen is divided into thirds—both vertically and horizontally. For the most pleasing composition the most important details of the scene should fall at points where these lines intersect. Obviously, this is no hard and fast rule, nor should it be adhered to so literally that the action becomes static.

Usually a precisely centered or symmetrical composition lacks drama. In most cases it is better to shoot the subject from one side or the other in order to create a measure of emphasis. However, there are exceptions to this rule as well, for there are times when a completely symmetrical composition is artistically pleasing on the screen. This sort of arrangement is usually most effective as a background to action which follows a less regular pattern

The horizon line is an element of composition which some find difficult to control, because it naturally seems to find its way to the center of the composition. This, however, should be avoided because the result is too pat In general it is better to let the horizon line cross in the lower third of the screen, favoring the sky with the bulk of the compositional area In special cases (where there is a great deal of foreground action) it is sometimes effective to have the horizon line in the upper third of the screen.

It is an axiom of design that diagonal lines are more forceful and more pleasing to the eye than straight vertical or horizontal lines. This principle holds true also in motion picture composition For this reason it is well to avoid unimaginative straight-on angles of buildings, signs, and similar straight line subjects. It is much more effective to shoot such subjects from one side or the other so that lines form diagonals across the screen Not only is this better composition, but it is more dramatic Such a scene shot with a wide-angle lens from a low camera vantage point can be especially effective.

The S curve is a compositional element that is as old as Art itself From the most primitive cave photographs down to the most modern advertising art, this element appears repeatedly, but not monotonously On the screen the S curve is no less effective, especially when it is made a strong element in long shots or landscape backgrounds. A winding river or road curve in the shape of an S can form a perfect compositional motif for a scene. Carrying the principle a bit further, the S curve can often be introduced into the design of interior sets. Generally, the eye tends to be led along this curve, so it is better to have the curve lead toward the focal point of action whenever possible The S curve can also be used effectively in grouping players within a scene—especially in mass ensemble shots. Here the arrangement should not be too precise or it will appear artificial on the screen.

In the more academic discussions of screen composition the term *juxtaposition* invariably is heard It refers to two consecutive scenes differing in meaning, but similar in compositional form. For example, an effective transition between two sequences might be achieved by dissolving from a closeup of a spinning automobile wheel to a closeup of a spinning roulette wheel. In this case the similar compositional pattern provides an extra link between these two scenes. Juxtaposition tends to become arty if it is written into a script merely for effect Its use should be restricted to instances in which it can definitely add to the value of a transition or montage.

Closeups of faces present compositional problems on the screen, too. The easiest way to shoot such closeups, of course, is to set up a straight camera angle with the face centered on the screen Rather than relying on this undramatic approach, however, it is often better to frame the face to one side, letting another element of the scene balance the composition. If the face is portrayed as looking in a definite right or left direction, more

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space should be left on the side towards which it is looking. Extreme closeups, in which just a segment of the face appears, will be more effective if either the face or the camera is slightly tilted.

The matter of balance is as important for screen composition as for any other type of composition, and it can be achieved by studiously placing players or elements so they will balance with others in the scene. Very often, when these elements do not lend themselves well to balanced composition, masses of light or shadow can be used most effectively to enhance the balance of the pattern.

We have spoken of juxtaposition as meaning a similarity in compositional pattern between consecutive scenes. Turning this principle around we come to the theory of opposing compositions in consecutive scenes, a device which can be quite dramatic. The drama is obvious when one visualizes two armies marching toward each other, and photographed from opposite angles. By properly intercutting this footage, the aspects of conflict between the two patterns of action is emphasized. However, even static objects can be made to oppose each other compatibly through the proper choice of angles and cutting.

Since composition for the screen is a fluid thing, it is quite permissible (and often most effective) to change not only the compositional pattern but the image size within the scene. This is done either by moving the camera toward or away from the subject or allowing the subject to approach or move away from the camera. In this way, variety and dramatic emphasis can be achieved without the necessity of cutting — thus permitting a fluid continuity from one composition to the other.

The framing of scenes with foreground objects is not a new principle of screen composition, but it is a most effective device and one which is rarely used to fullest advantage by the cinematographer. Besides providing an extra compositional element with which to work, the foreground object ties the main subject more closely to its surroundings and also adds depth to the scene.

The wide-angle lens is the favorite of the cinematographer who wishes to achieve dramatic compositions. It is naturally a dramatic lens since its main characteristic is a foreshortening

of the scene. Distances can be exaggerated as can the size and special relationships of various objects within the scene. Diagonal lines can be made to converge dramatically, and it is also possible to produce striking compositions in which a foreground object looms prominently before a significant subject in the background.

The choice of camera angle is most important in achieving forceful composition. The low angle (especially when shot with a wide-angle lens) tends to exaggerate the height of the subject, making it seem to loom into the composition. Thus it is especially effective in the dramatic or mystery type of film. In contrast, use of a high camera angle tends to minimize the size and importance of a subject, giving the audience an emphatic sense of superiority as it looks down upon the scene.

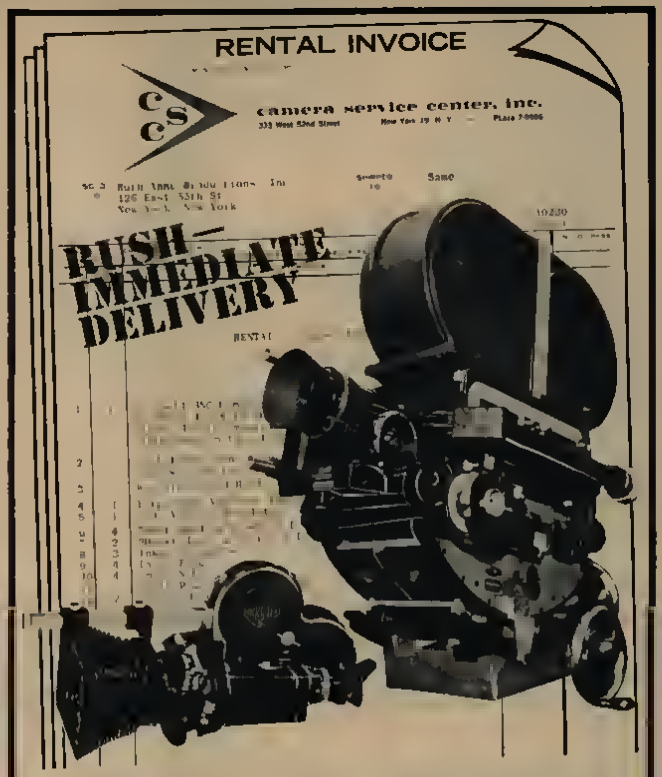
Tilted camera compositions have their place in the modern motion picture, especially in montage sequences and sequences which subjectively duplicate the point of view of one of the players. However, like all unusual techniques, it is a device which can be easily misused, and the cinematographer should guard against the use of weird angles unless they are properly motivated.

Too often the tendency is to think of pictorial composition in terms of travel films, documentaries, and vacation films made by home movie makers. But it is a dominant element of virtually every type of motion picture except the scientific. Whether you are a photographer of TV newsreels, documentaries, industrial films or travelogues, knowledge of pictorial composition, artfully used, will give your photography the professional polish that distinguishes it as a genuine creative accomplishment. ■

GOT A PROBLEM?

Need professional advice on a picture-making problem, about equipment, film or cinematography? Reader's questions are invited and will be answered by mail when accompanied by a stamped, addressed envelope for reply. Questions and answers considered of general interest to other readers will be published here each month.

Address your questions to the "Question & Answer Editor," American Cinematographer, P.O. Box 2230, Hollywood 28, Calif.



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WHY PRINTS FOR TV ARE DIFFERENT

Continued from Page 471

ground is alternately dark and light should be avoided. Alternate camera angles in a given sequence should have similar backgronud brightness.

8 Scenes should be composed and lighted so that there is always something in the scene lighter than the face, or point of interest, and if possible, something darker than the face.

9 Camera apertures should cover sufficient frame area to be as large or larger than the television transmitted area. All important action should take place within the "safe action area." All titles and other written material should be kept well within the "safe title area." These areas are as follows:

Transmitted Area

35mm 0.792" wide x 0.594" high
16mm 0.368" wide x 0.276" high

Safe Action Area

35mm 0.712" wide x 0.478" high
16mm 0.331" wide x 0.218" high

Safe Title Area

35mm 0.621" wide x 0.166" high
16mm 0.288" wide x 0.216" high

The recommended review room projector aperture size is 0.746" high, with rounded corners.**

The safe action area and safe title area are those areas which will be seen on the majority of home TV receivers. Titles or important action should not extend into the corner areas as these areas may be lost due to the oval shape of some receiver masks.

After these suggestions for original exposure, the recommendations cover laboratory practices from the producer's point of view. The following excerpts are key points:

Original Negatives should be developed to a normal 1b gamma of 0.65 to 0.70. The 11b gammas for a given 1b gamma will vary with film stocks and developers. Negatives should be free of excessive abrasion, dirt, drying streaks and water spots, within the laboratory control. Negatives should be developed with sufficient agitation so that directional effects are minimized.

Dupe Negatives should be developed to a control gamma which will reproduce the contrast and gray scale of the original negative. On contact dupes, this is approximately a gamma of 0.65 as read by the print-through method. On optical dupes, this is approximately a gamma of 0.55. Negatives should be free of excessive abrasion, dirt, drying streaks and water spots. Negatives should be developed with sufficient agitation so that directional effects are minimized.

Prints should be made on a positive stock and developed to a print contrast as required by the photographic contrast of the negative to be printed.

In timing the prints it is recognized that the printer lights for the numerous scenes comprising an average film are selected from cinex tests or by visible action of the negative. The resulting positive for telecasting should appear somewhere close in density in the highlight areas and somewhat lower in contrast than prints customarily intended for theatre projection.

Prints should be timed so that the scene to scene balance of overall quality is as uniform as possible.

Prints should be free of any spots, streaks or scratches not present in the negative.

Prints should be surface-treated with a lubricant or other protective treatment to insure smooth projection and to minimize wear and scratches.

The conditions listed above apply with equal validity to prints made in 16mm either by reduction printing or by contact printing from original or duplicate negatives.

Color film for Television is also discussed in the Association of Cinema Laboratories pamphlet with this introduction: "Since there is no provision for contrast control in color film negatives or prints available for use, more of the burden of producing acceptable color prints for TV falls on the photography and lighting. The lighting contrast should be kept to a level of 1.5

***These recommendations were 1957 Present practice utilizes a 35mm projector aperture size of 0.757" wide by 0.565" high. Present 16mm standards for review room aperture and Safe Action Area are 0.352" by 0.263", and 0.289" by 0.217" for Safe Title Area. Also it should be noted that some of these recommendations differ from those of the A.S.C. Research and Educational Committee which stipulate dimensions of 0.757" x 0.565" for both the 35mm Safe Action Area and 35mm Review Room projector aperture.—ED.*

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to 2 to 1 and unlit dark areas should be avoided. The exposure of the negative must be very carefully controlled in order to achieve maximum color saturation.

Most of the practices recommended for black-and-white photography are equally applicable here.

Laboratory work on color negatives is covered in the pamphlet by the following:

Negatives should be processed as soon as possible after exposure. Developing should be done in accordance with the manufacturer's specifications.

Color Master Positives and/or Separation Master Positives (In present, standard terminology "interpositive" is used instead of "master positive") should be exposed sufficiently to insure a linear gray scale. Separation positives should be developed to the control gammas that will produce a balanced color internegative. Color master positives should be processed in accordance with the manufacturer's specifications.

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proper film stock for reproduction from Kodachrome (Ed: or Ektachrome) separation master positives or color master positives. Exposure should be sufficient to insure a good gray scale and give optimum color saturation. Developing should be done in accordance with the manufacturer's specifications

Prints should be timed so that the prints are dark enough to give good color saturation but not dark enough to make shadows too dense The equivalent gray density values should be about the same as those given for the best results in black-and-white.

A&B Printing is recommended for making dissolves and fades, in the manulacture of prints for TV from original negatives, or for making color master positives. This practice avoids the use of second generation material intercut with the original material, which causes desaturation and mismatch of colors.

Black-and-White Prints from color negatives should be made by first making a panchromatic master positive Irom the color negative. in accordance with the gamma and densities as set Iorth Ior a normal black-and-white master positive. The black-and-white prints are made from this dupe to television specifications as outlined previously

All of the other practices as outlined Ior black-and-white laboratory procedures apply also in color, 35mm and 16mm.

Ohviously the print made for television broadcast will look different than the print made for screening—when projected This is one of the problems of the laboratory, which usually finds itself working for both producer and network or television station on the same film material The producer wants to screen his finished print for his personal approval and —since be is a film man—he wants to see a print with good contrast and sparkle But, the TV official has to judge a print by how well it will televise. He can put it through a closed-circuit run, but he frequently must judge the print projected on a screen. And be likes the flat print

But, why the flat print?

To answer this question, we quote from "An Engineering Approach to Television," an SMPTE paper published in the Society's Journal for November, 1959 (Vol 68, No 11, Pg 739), and authored by L. J. Murch. Harold Wright, and Rodger J. Ross of the Canadian Broadcasting Company.

"When the quality ol film is being judged subjectively by direct projection, the brightness distribution on the screen is determined only by tbe density of the film in conjunction with the intensity of the projector lamp and the reflectance of the screen. The brightness of the television screen, on the other hand, is determined by the output voltage Irom the telecine equipment, hence the density distribution of the film must be such as to produce the correct voltages from the telecine equipment in order to produce a satisfactory subjective result on the television screen.

"If the particular density distribution required to produce these output voltages happens to produce a good subjective picture when viewed directly, this is of no consequence whatever, since the only purpose of the film is to store information which will produce the correct voltages from the telecine equipment

"Apart from the convenience of using standard film equipment, there is no reason why film produced Ior television should not he of such a form as to be completely unrecognizable by direct viewing if this were found to enhance the broad-

FLASHBACK TO YESTERYEAR

1912—Photographing a scene Ior the feature production "Ivanhoe" on the grounds surrounding Chepstow Castle, Chepstow, Monmouthshire, England, for the Independent Motion Picture Company (IMP), New York City, ol which "Uncle" Carl Laemmle was President. The cameraman (arrow) is Ernest Palmer, ASC The director was Herbert Brennan, who also played a part in the production. In photo, leading man King Baggott is directing the scene. Cameraman Palmer has pressed a dress extra into service to crank one ol the two Williamson cameras, which used 200 foot film loads.

"Good old days?" reminisced now retired Ernest Palmer. "No assistants. No grips No electricians No income tax. No money Nothing much to do except load film for two movie cameras and a still camera Shoot all day. Pack up the film and ship it to London for processing, then prepare for the next day's shooting."

The IMP studio, home base for the company, was located at 43rd and 11th Avenue, and was the springboard for such early-day film stars as Mary Pickford, Owen Moore, Isahel Ray, George Loan Tucker, Thomas Ince, Bob Daley, Jane Gayle, King Baggott, and Leah Baird who, incidentally, was leading lady in this silent production ol "Ivanhoe." ■

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cast quality via telecine equipment. Such a system has not been developed however The fact that the images on film have a recognizable form has delayed by several years the progress of television film quality since it has led to complete mis understanding of the requirements of the television system."

That certainly is a clear and strong statement. We are not going to challenge it However, we can't help but be just a little bit skeptical of the statement because of actual experience. For one thing, although there may be a standard of picture transmission, everyone in the TV film business knows that the print made according to present TV standards will look different on different stations Then, from time to time we'll see a recent print from a theatrical picture made in the pre-television era of the 30's, and it will look beautiful on the TV screen Also—and this is most encouraging—there has been a steady improvement in the TV chain system permitting use of television prints that are closer to the overall density and appearance of a screen print. *(Contd. Pg 496)*

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At the moment, though, majority opinion is that the print made to satisfy TV transmission requirements most likely will not screen well in conventional motion picture projection—that is, it won't look sharp and crisp and have good contrast

So, if the producer wants to screen a print with good blacks and whites, and the television film man wants to televise a compressed grey scale flat print what's to be done about it?

This then, is a problem for the film laboratory ■

100 DOCUMENTARIES

Continued from Page 483

content of the documentaries was not too demanding, they were mainly to be short travelogues in color of points of interest in cities and towns and of interesting out of the way places in the Venezuelean outlands, much of which is relatively unknown to the citizens of the big cities

Sometimes we were lucky and able to shoot enough film for two documentaries in a single day But in order to keep to our schedule for there was always adverse weather to consider, we established a certain standard for our scripts and in our shooting procedure In the smaller towns we visited we concentrated on old historic churches, village squares, and monuments In others we concentrated our cameras on artisans, laborers, and inquired about local folklore

At the end of the first two weeks, we returned to Caracas with footage for ten films Eight films were sent to the New York laboratory for processing and we managed to have the remaining two processed in Caracas and thus get a start on editing and recording And here we faced a new problem: no local laboratory was prepared to do color duping or make masters, so we were unable to incorporate any effects, fades or lap dissolves in our films Luckily, our producer, who had remained in Caracas, located an Oxberry animation camera and stand With this equipment we used corrected color work prints as masters and made our own effects and dissolves We used regular Eastman Color negative in the bipack magazine, and as a light source, illumination reflected from a sheet of white paper

Later, we became more sophisticated and made traveling mattes and other effects. The local labs processed our "dupe" negatives and we were in business!

Meanwhile, prints of the negatives we had shipped to New York had been returned, and we used the same editing cutting and effects procedures as for the first two films As a matter of fact, we followed this method for the remainder of the films in the contract

We were now several weeks ahead of our schedule, and month by month we gained additional time and extended our time leeway as protection against any delays that might yet occur through unlooked for weather delays or other situations

Still another break for us was the fact the sponsor required sufficient prints to service some 300 theatres These were supplied through a special arrangement we made with Laboratories Caribe whereby we would give them the printing work if they would provide 24 hour processing service on both our negatives and positives The head of the laboratory, who was an ex-cameraman readily understood our problem as well as the profits that were to be made on quantity production of release prints, and delivered our lab work as required. From then on we had no more lab problems nor costly delays involved through having to ship our films to New York for processing and printing.

We now had between 60 and 70 films completed, had mastered our production routines and were quite happy that things were working so smoothly But we had never thought of running out of subject matter After all, 100 four-minute films make quite a demand on the material at hand It was rather startling to us therefore when one day, with 20 to 25 films of our contract still to be produced, we realized that we had photographed practically all the cities and towns, all the interesting artisans and all the folklore of the relatively nearby regions of Venezuela We were now faced with the prospect of having to venture

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deeper into the country and photograph the native Indians, diamond diggers, and exotic jungle regions. This meant not only added expense but such trips entail more production time. Now in spite of the fact we were still 30 days ahead of our schedule, we were pessimistic about our chances of making two films a week in the jungle. Just to reach the region of the Indians would require at least ten days of hard travel.

We had no other choice. Already our sponsor had complained about the repetition of subject matter in our films, and was demanding something different. Our filming was restricted to Venezuela, and we could not cross the country's borders to seek subject matter elsewhere. So into the jungle we went. We were able to shoot one film about every 10 days. This threatened our schedule, but as it turned out it was worth it. The films we were now making proved to be the best in the series. Later they received the best reviews and no little public acclaim, despite the fact that each one carried the advertiser's message at the end. Everyone was happy—we, for we had made good films; the public was getting what it liked, and the sponsor was elated that the public was clamoring for his documentaries.

But this happy situation did not last. We were running short on films and when we had only six more to produce, we ran completely out of ideas and subject matter. In a desperate effort to deliver two films weekly according to our schedule, we now resorted to reviewing and editing the out takes of our earlier films and shooting scenes in zoological parks, etc., to tie this material together into acceptable film presentations. Finally, we made one more trip into the jungle, spent more time than we had to, but returned with enough footage for six films and wind up our contract.

So popular did this series of films become with the public that after our contract was terminated, the sponsor—Cerveza Polar—set up its own film production department, and continues to turn out documentary films for the series which, incidentally, was titled "Viajando con Polar"—traveling with Polar.

The hundred films we made already have played "return engagements" in most all Venezuelan theatres, and we are elated that the public never tires of applauding them. ■

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DUAL CAMERA PHOTOGRAPHY

Continued from Page 484

buttons operating camera solenoids, or mechanical leverage devices easily constructed by the user.

When shooting with spring-motor driven cameras, with the springs fully wound, the shutter release of one camera can be locked in running position and the second camera operated manually. Here, as with all dual-camera arrangements, both cameras should be carefully aligned in advance so both will take in the identical field of view. Where lenses of different local length are used on the two cameras, the fields of view will differ but should coincide as to center of the field.

To shoot action both forward and reverse at the same time, such as the familiar trick shot of a swimmer who dives off a high board into the water, then reverses the action, emerging from the water head first and landing upright on the diving board, one camera is mounted upside-down, as shown in one of the photos. In this case, it is important that the lenses on both cameras be of the same focal length so that the fields of view rendered will be identical. In making this type shot both cameras are started and operated simultaneously. The camera mounted upside-down records the action that appears reversed on the screen. (The film in this camera is turned end-for-end and spliced with that from the upright camera, to achieve the effect.)

A variation in this effect is to photograph the person diving into the water in slow motion, and the reverse action at half camera speed to produce accelerated action on the screen. Here the upright camera is set to operate at above normal speed, and the upside-down camera at below normal speed.

Still another useful application of the Zeper dual camera plate is to mount a still camera and a motion picture camera together to enable the cameraman to shoot stills as well as movies of the same subject or event.

Perhaps one of the most important applications of this gadget is using it to provide two cameras to secure long shots and closeups simultaneously of wildlife activity. Admittedly good shots of wildlife do not come easily nor frequently, but with two cameras recording a rare bit of action at the same time with different lenses, the amount of usable footage is not only doubled but interesting variety is provided to enhance editing of the subject. ■

MAKING A MARKETABLE MOVIE

Continued from Page 477

"When a friend of mine, Paul A. Mayer, came to me with a script, I was eager to try it," he said. "Until now, I had been working in complete freedom and filming as I liked. I welcomed the opportunity to work under the discipline of a formal script."

The story Mayer had written concerned the experiences of two teenagers who discover first love on the roof of an apartment building on a warm summer evening.

Before he started this project, Brown sought the advice of cinematographer Boris Kaufman, ASC, who is well known for his work in such films as "On The Waterfront." Kaufmann looked over his plans and encouraged Brown to get started.

"I had dreams of discovering two youngsters from the streets of New York," Brown said. "But I soon changed my mind after interviewing nearly 200 kids. I finally selected Nicholas Hyams and Ann Draper, both professionals with a lot of acting experience."

Brown held his customary discussion sessions for a whole week, so that his stars could become thoroughly familiar with his intentions. He encouraged them to make suggestions and thus, a rapport between director and actors was established.

The filming for the 20-minute picture took place on seven evenings. One was spent in the streets for opening and establishing shots. The other six were spent on the roof of a six-story apartment building near the East River, one of the few such buildings left in the area. Brown had selected this location because it afforded the background of the river,

bridges, boats and a myriad of lights. Here photography was done in low key to bring up the lights in the background. Brown used between six and eight foot-candles of illumination to achieve this end. The film stock was Dupont Superior 4. Prior to shooting here, a number of exposure tests were made and it was discovered that the fog level became objectionable when the film was shot for forced development at about 1200 ASA, so he settled for 1000 ASA. The resultant grain was not a major consideration, because it was not so noticeable with the contrasty lighting employed.

Lights were limited to a pair of 150 watt and several 200 watt Mole Richardson "Babies" plus 150-watt floodlights added for good measure. Use of such lightweight equipment was especially important, because there was no elevator in the building and all gear had to be carried up several flights of stairs each day.

Because of the low light level employed, one of Brown's major problems was focus. He worked with each lens wide open at f/2, which resulted in a very shallow depth of field. Thus, whenever an actor moved even an inch or two, focus had to be changed to compensate for it. So precise were these focusing requirements, that Brown manipulated the focus himself as he watched the action through the reflex viewing system of the camera.

"In all the footage exposed there was only one scene in which the focus was a bit off," he said.

Brown spent one night of the six reshooting some scenes, because of static marks that showed up on the film. He never was able to trace the exact source of his trouble.

By employing careful pre-production planning and the lessons he had learned in making industrial films, Brown and his small crew brought the picture in on schedule. But two of his biggest jobs were still ahead of him—editing and finding distribution for the film.

Brown had edited all his previous films himself. Time, however, was a factor. Because he had borrowed money to make this film, he continued producing industrial films so that he could eat. In between, he spent what spare hours he could on his theatrical picture, and finally, after six months he had it completed.

When Brown went out to sell his picture to distributors, he found him

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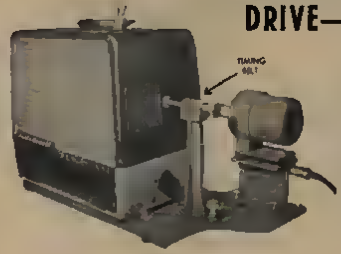

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self in strange new territory. Previously, his pictures had all been paid for directly by his clients and distribution was never a problem. Now in the hard business world he had to come to grips with distributors who were highly critical of several aspects of the picture.

"First of all we had a picture with erotic overtones," Brown said. "There was quite a bit of kissing—from pecks to passion."

Some who had viewed the film felt that the subject matter would detract from most main features coupled with it. Obviously this could be detrimental where the feature was a picture on a completely different level.

The length of Brown's picture also was an obstacle he discovered. He was told that his 20-minute short was *too long* for the programs of many theaters.

Despite these drawbacks, Brown negotiated his first commercial New York showing at the Murray Hill theater. Now with the film destined for national distribution he believes that he can at least get back his production costs. But more important, he feels, is the educational experience he has gotten from the project.

From his first theatrical venture Brown learned several important lessons. A film must be of the correct length and it must be compatible with a wide range of features. His next short subject will be a comedy between 8 and 15 minutes in length. This, he believes, will balance well with longer dramatic pictures. His script for the second production tells the story of two grotesque characters who try to rob the proprietor of a candy store, who talks them out of their ill-conceived venture.

Brown says that he has two famed Broadway actors interested in the project. Because he has successfully completed one short subject, financial backing for his next one has not been a problem.

Thus Barry K. Brown has joined the growing roster of adventurous and imaginative film makers who are providing film exhibitors with provocative and sometimes off-beat motion pictures ranging from short subjects to features. And lending these enterprising film makers an encouraging hand are the new breed of film distributors, such as Union Film Distributors, Inc., New York, which is booking Brown's first theatrical film effort. Ambitious film makers with experience and talent whose dreams of getting into theatrical film production have ended in frustration may well ponder Brown's success and the course he pursued to achieve it. ■

REEL STORAGE RACK

Continued from Page 480

The rack, as designed, can also be installed in an existing closet or cabinet if so desired.

Construction

The sides are made in two pieces. The ¾" lumber is cut full width and then to get the 15½" overall width, a piece 38"x4" is fastened to the side piece by means of cleats. These are made out of the same stock and are fastened to the inside of the side pieces with 2¼" screws, one at the bottom, one at the 38" point and another one at the top.

Spacers are fastened to front and back pieces with glue and 1" brads. The spacer racks should be fastened to the sides at a 20° angle by means of two inch screws.

Slots for the angle irons can easily be cut by drilling a hole at the apex and then cutting a ⅛" V shaped 90° slot so as to make a snug fit for the angle irons. It is advisable to insert the angle irons before installing the racks.

In order to facilitate the handling of the rack after completion, four roller type casters can be fastened to the bottom of the side pieces.

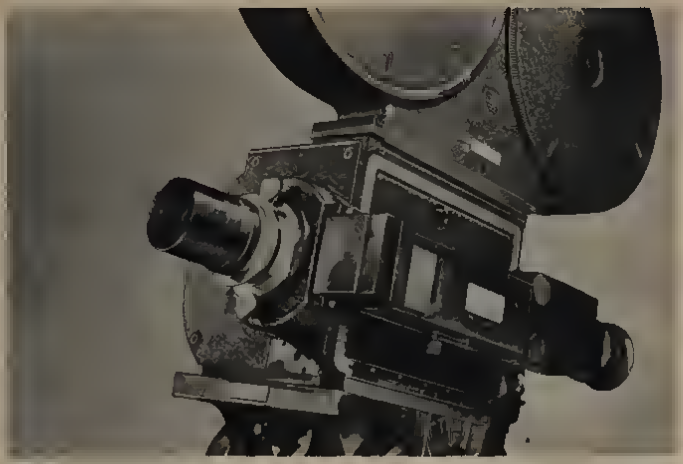
The completed rack can be painted or varnished as desired; however, if the spacers are to be painted or varnished it would be simpler to do so before fastening them in place.

List of Materials

The materials required for the film rack described above, are as follows:

4 angle irons, ⅛"x1¼"x36"
Side Pieces.
2 pieces ¾"x11½"x57"
2 pieces ¾"x4"x38"
4 cleats, ¾"x1"x15½"
2 cleats, ¾"x1"x11½"
8 front and back pieces for shelves, 3"x½"x34½"
44 pieces ¼" plywood for spacers, 7½"x3"x3"
44 pieces ¼" plywood for spacers 14"x8"x3"
1" brads
2¼" wood screws
4 casters ■

CAMERA MODIFICATION



RECOGNIZE IT?—Mitchell 35mm Model NC camera modified with full reflex viewing and single lens front plate. The standard 'L' casting with its rockover assembly and the 4-lens turret have been removed, thus reducing camera's original weight by approximately 11 pounds.

MITCHELL and Bell & Howell professional motion picture cameras are now being modified for reflex through-the-lens focusing and viewing, thus eliminating the parallex problems which have plagued motion picture photographers for years. Engineers of Camera Equipment Company Inc. New York, have designed modifications for the Mitchell 35mm High-Speed, NC, and Bell & Howell Standard and the Eyemo cameras to accomodate an optically perfect image diverter system. Said to have taken more than three years to perfect, the resultant optical system is free from aberrations, coma, color shift, image degradation and other optical defects, which heretofore have made beam-splitters impractical for the motion picture camera, according to CECO.

The CECO Reflex modification eliminates the rack over assembly from the Mitchell and Bell & Howell standard cameras. Where the Mitchell 4-lens turret is removed and a single-lens receptacle is supplied, the entire "L" Casting of the camera can be eliminated, thus reducing the camera weight appreciably.

The diverted image is magnified approximately ten times in the viewer and it appears on a full aperture ground glass, which allows the operator to focus and view continually while shooting, even at minimal light levels. No flicker is apparent in the finder system during camera operation. Tests have revealed that this Reflex modfication will allow the altered cameras to be used on a medium-weight tripod, thus further decreasing camera equipment weight without sacrificing production quality.

A series of exhaustive exposure tests have been made with the Reflex converted cameras by CECO. The results of the tests revealed no loss of resolution or contrast, no increased fall off at the edges of the frame and no color shift or de-gradation when color film is exposed, according to company engineers. The results of other tests indicate that no iris compensation need be made where the light level is above 125 foot candles. In low light level situations, a ¼ stop increase in exposure is recommended.

When the modification is applied to the Bell & Howell Eyemo camera, the positive view-finder objective assembly may be eliminated along with the parallex correction control knob. The shift over alignment gauge for the Model Q is also rendered obsolete as well as the need to rotate the lens turret when lining up for a shot. The Eyemo thus becomes a much faster operating camera, one that should be welcomed by news reelmen as well as cameramen who must move fast to capture uncontrolled action in filming current events. The military should also find the Reflex modification invaluable for combat and reporting photography as well as for

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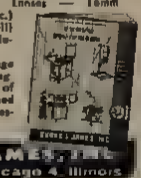

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Because of the simplicity of its design, the CECO Reflex modification (already adapted to the Eyemo, B & H 35mm Model 2709, and Mitchell 35mm Standard, Standard Hi Speed or the NC with either single lens without turret, or with 4 lens turret) can also be applied to many other cameras by Camera Equipment Company. ■

CAMERAS AT CAPITOL

Continued from Page 479

signments, says of Preminger "He invariably has fresh and original ideas that provide a stimulating challenge. He knows exactly what he's doing and what he wants because he has everything very carefully planned before he walks on the set. He knows how long each set-up should take and he leaves you alone to get it."

The photography of a Preminger picture does, indeed present certain unique photographic challenges. Preminger shoots in actual locales that are real for his story even though practical elements render them threoretically impossible to photograph. He demands absolute realism, even foregoing the use of diffusion to soften the features of his female stars. Similarly, he will not allow male players to use makeup even to cover encroaching stubble. He sets up trucking shots in which the camera follows players from a dimly lit location interior (f/3.5 light) out into a blazing exterior (f/16 light). He often shoots in tiny, low-ceilinged rooms just barely large enough for the actors and the camera, with little or no space to hang lights. He insists that every lengthy master shot (no matter how complicated the action nor how many separate camera moves may be involved) be perfect all the way through. He will not do a pickup on a scene if there is the slightest fluff, but will insist on starting over again from the beginning.

"Advise & Consent" presented even greater photographic problems than usual because the entire film, closeups and all, was shot with a 40mm wide-angle Panavision lens. The main reason for this was to insure more accurate follow-focus on radical camera moves from long shots to closeups, and also to achieve greater depth-of field in split-focus shots of action taking place in widely separated planes.

Because the wide angle lens encompasses such a vast expanse of background, much wider areas than usual had to be lighted and a large sunshade had to be installed over the lens to shield it from the flare from lamps, which were often necessarily mounted just on the periphery of the composition. The danger of flare was especially prevalent when the camera was tilted at the slightest upward angle. However, since a camera equipped with a wide-angle lens must work closer to the players than it would with a longer lens, the sunshade itself created a problem by casting shadows on the actors' faces in closeups. Leavitt and his crew had to be ever vigilant to prevent such shadows intruding.

A wide range of impressive locations in and around Washington, D.C., lent the film an atmosphere of complete authenticity while, at the same time created a photographic obstacle course. The Sheraton-Park Hotel, where the cast and crew occupied 200 rooms, provided a number of interior and exterior backgrounds for dramatic scenes. The huge ballroom served as the locale of the banquet scene in which the President addresses the White House press corps. Exterior sequences, several of which were shot at night, took in the Washington Monument, the Mall—two miles of lawn which divides the capital into North and South, the National Airport (for interiors as well), and Chesapeake Bay near Annapolis for a scene aboard the destroyer USS Harlan R. Dickson.

Another locale was the Rotunda, the vast circular hall directly below the Capitol dome with its impressive array of paintings, murals and sculpture. The film company invaded the cafeteria corridors and offices of the Old Senate Office Building—and one of the picture's most exciting and difficult sequences, the Senate subcommittee hearing, was shot in the famous Caucus Room, familiar to millions of televiewers as the scene of the Army-McCarthy hearing and the Kefauver and McClellan investigations. Other location sites included the New Senate Office Building and the Treasury Building.

Continued on Page 504

MOVIE MAKING MERMAID

MOVIE-MAKING MERMAID shoots some underwater scenery at Weeki Wachi Springs, Fla., with Bell & Howell 8mm camera in new underwater housing, which accommodates cameras in the 240H Director series. Fin-footed photographer is a member of the "ballet troupe" that performs daily in the Weeki Wachi Springs natural underwater theater. Her picture was taken through an "underwater window" by a Bell & Howell Co. one! 35mm camera loaded with Tri-X film and set at 1/250th of a second at f/5.6. The underwater camera housing is made by Bell & Howell Co.

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CAMERAS AT CAPITOL

Continued from Page 502

Lighting the cavernous interiors of these government buildings was no simple accomplishment In some cases, 10-kilowatt lamps could be installed, but in many of the smaller rooms entire sequences were photographed by the light of a single lamp unit Low ceilings and other structural limitations prevented lights from being placed ideally—and things really became difficult in several sequences where the camera ultimately traversed a radius of 360 degrees in a single scene, allowing no "off-camera" area in which to place the lights Where cramped quarters would not permit the use of standard studio lamps, Leavitt employed portable Lowell-light units—lightweight brackets that can be taped to walls or readily clamped to other surfaces

To light long trucking shots in halls and corridors, lamps were placed either on the dolly itself or on a separate perambulator that kept pace with the camera and the action To illuminate the background for a lengthy dialogue scene photographed aboard a tram-car rolling through the old Senate subway, lights were concealed aboard the vehicle and beamed against the walls of the tunnel

The film includes several exterior night sequences also shot in actual locations One of these is an important meeting between two government officials that takes place in the parklike environs of the Mall Another depicts a lavish diplomatic party in progress on the grounds of a vast estate Both locations had to be lighted over wide areas to accommodate intricate moving camera shots. In the case of the latter sequence lamps had to be mounted high on the roof of the mansion so they would not be visible in the long shots Since the lights could be beamed from only one direction there was the problem that the lighting would appear flat Leavitt avoided this by placing his camera at a three-quarter angle to the light source and achieved the illusion of a cross-lighted effect In order to gain full exposure for these night scenes as well as to pick up whatever available light detail naturally existed in the backgrounds, Leavitt switched from Eastman Plus-X film, used in the bulk of the shooting, to the considerably faster Double-X emulsion

Because of a long-standing ban on photography in the Senate chamber—where some of the film's most dramatic action takes place—it was necessary to construct a replica of this century-old hall on a sound stage at Columbia studios in Hollywood. The huge set duplicated exactly the dimensions of the actual chamber, as well as its tiered galleries and 100 antique desks

Leavitt's photographic handling of the film's climactic sequence in this set is a masterpiece of continuous photographic treatment In the course of filming it his camera mounted on a Chapman boom sweeps through an incredible range of split-second moves geared to staccato action Like all the other scenes photographed in 23 actual Washington locales, this sequence captures true documentary quality yet retains the top-notch professional finish that is the hallmark of the imaginative cinematographer ■

ZOOM LENS CONTROL

Continued from Page 475

at 450 yards, although the semi-opaque matt outline area shows more of the action or scene

Quite properly Bryhn shortened the lens barrel to permit installation of an Eyemo lens lock on the retaining ring which necks down to a C mount As I expected to use the adapted lens on an Auricon 600, a portion of the turret on this camera had to be milled to accept the retaining ring At this point in the project, Bryhn was taken ill and had to abandon further work on it and as the racing season was fast approaching, I had the work shipped to me in its incomplete state Cy Plumb, an excellent Detroit camera technician took it over and, with the addition of several innovations of his own, soon had the job completed

One of the things that was a must was a viewfinder that would swing away from the camera to permit easy loading of film Plumb came up with an extremely simple and accurate arrangement that insures precise return of the finder to its proper position

Because the zooming operation of the large lens moved the shock mounted turret of the camera, this was remedied by the addition of a sturdy encircling ring at the front of the lens Now, with the lens properly positioned and zeroed-in with the finder, the final innovation was added—the semi automatic diaphragm control shown in the

accompanying photos. Fig 3 shows the entire complex mounted on a large O'Connor fluid head operated from a Mitchell hi-hat on a fixed stand. The 85-250mm Auto Nikkor zoom lens with coupled finder is mounted on the Arriflex 600 with 400-foot magazine. The trailing cable is the diaphragm changing link, which will be described later, and there is a sturdy base plate incorporating a strong support for the lens.

Fig 1 shows the zoom operating lever (1) connecting the finder and the lens zoom section. In operation the cameraman slides the knurled knob (2) smoothly forward and back to change the focal length of the finder and the lens simultaneously.

In Fig. 2, the zoom lever has been disconnected and the finder support bracket (3) has been lowered to permit threading the camera. The Eyemo lens retaining ring, previously mentioned, is shown at (4). Micrometer adjustment for raising and lowering the finder is shown at (5).

Fig 4 is a closeup view showing the lens diaphragm control which is anchored to the camera's blimping hood retaining rods (6). This permits ready adjustment of the distances and angles necessary to allow the cable to operate at its proper angle and to pivot on the automatic diaphragm knob that is original equipment with the zoom lens. The length of the wire of the flexible cable regulates the number of stops the cameraman desires either open or closed when he presses the knob (7) on the tripod head handle (Fig 5 at right). The same arrangement, with slight modification, can be used for follow focus. •

BOOKS, CATALOGUES & BROCHURES

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New M-R Lighting Catalog

What is probably the most complete line of specialized set lighting equipment offered by one manufacturer is illustrated and described in Mole-Richardson Company's new Catalog J. The 60-page, 8½"x11" catalog lists all M-R lighting equipment, pedestals, grid equipment, accessories, special effects devices, microphone boom, power distribution items, and books on cinematography and film production. Adding immensely to the book's value, also, are the Globe Table, Illumination Tables, and treatise on Motion Picture Set Lighting that concludes the catalog.

•

Photographic Equipment Catalog

Just about every item, large and small, used in still and motion picture photography and film production is listed in the new 148-page catalog issued by Burke & James, Inc., in June. For your free copy, write the company at 321 So. Wabash Ave., Chicago 4, Ill.

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Photo Instrumentation

"The Traid Line For '62" is cover title of 32-page brochure recently issued by Traid Corporation, 17136 Ventura Blvd., Encino, Calif. Booklet illustrates and describes and gives prices on what is probably the most complete selection of "off the shelf" instrumentation hardware available anywhere—cameras, lenses, and other items that can be put to work on P.I. projects right away.

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Lowel-Light Literature

Lowel-Light Photo Engineering, 429 West 54th Street, New York 19, N. Y., offers two brochures with complete specifications and prices on Lowel-Light tape-up and clamp-on lighting fixtures, pocket-size barndoors, and a new Uni-6 Location Kit.

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Arriflex-16

Arriflex Corporation of America announces a new edition of their booklet describing the Arriflex-16 camera and related equipment. It contains a complete description of the camera and illustrates the important improvements and additions which have been incorporated in it during recent years. Copies are available free by addressing request to the company at 257 Park Avenue South, New York 10, N. Y.

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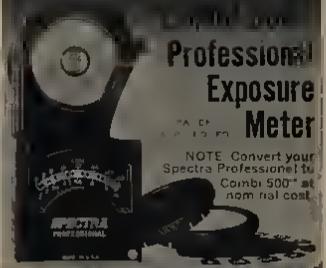

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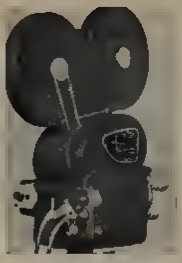

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BOOKS, CATALOGS

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Tape Recording

"How To Make Tape Recordings At Home" is title of a new 16-page booklet available from Triton Electronics, Inc., 62-05 30th Avenue, Woodside 77, N. Y.

Booklet offers tips on getting the most out of your tape recorder, suggests how to improve recording techniques, describes the different types of magnetic recording tapes and tells how to select the right ones for specific purposes, and gives instructions on tape editing. Included is a quick-reading chart of playing times for all available tape thicknesses, reel sizes and recording speeds. Enclose 10¢ with your request to cover postage and handling.

•

Kit Data Sheet

Available from ColorTran Industries, 630 South Flower St., Burbank, Calif., is a new technical data sheet on company's new industrial Motion Picture set lighting kit. Included are weight, specs and price of the kit, plus descriptions and illustrations of related accessory and cable kits.

SLOW MOTION IN TV

Continued from Page 473

the important part motion picture film plays in the progress of our television industry. Attempts have been made to achieve slow motion by electronic means in live TV broadcasting, but it has remained for film, aided by high-speed processing and modern continuous projection equipment to make it an accomplished fact. ■

BEHIND THE CAMERAS

Continued from Page 464

CHARLES LAWTON, ASC, "Spencer's Mountain" (Technicolor) with Henry Fonda and Maureen O'Hara. Delmer Daves, producer-director.

HARRY STRADLING, ASC, "Not on your Life!" (Belgrove Ents. Prod., Technicolor & P.Vision shooting in Greece) with Robert Preston and Tony Randall. Morton DaCosta, producer-director.

HAROLD STINE, ASC, "Mr. Limpet" (Technicolor) with Don Knotts and Carole Cook. Arthur Lubin and Wm. Tytla, directors.

ENZO SERAFIN, "Panic Button" (Shooting in Rome. Seven Arts Prods.) with Maurice Chevalier and Eleanor Parker. George Sherman, director.

HAROLD STINE, ASC, BURT GLENNON, "Cheyenne"•

ROBERT HOFFMAN, JACK MARQUETTE, "77 Sunset Strip"•

BURT GLENNON, "Hawaiian Eye"•

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